

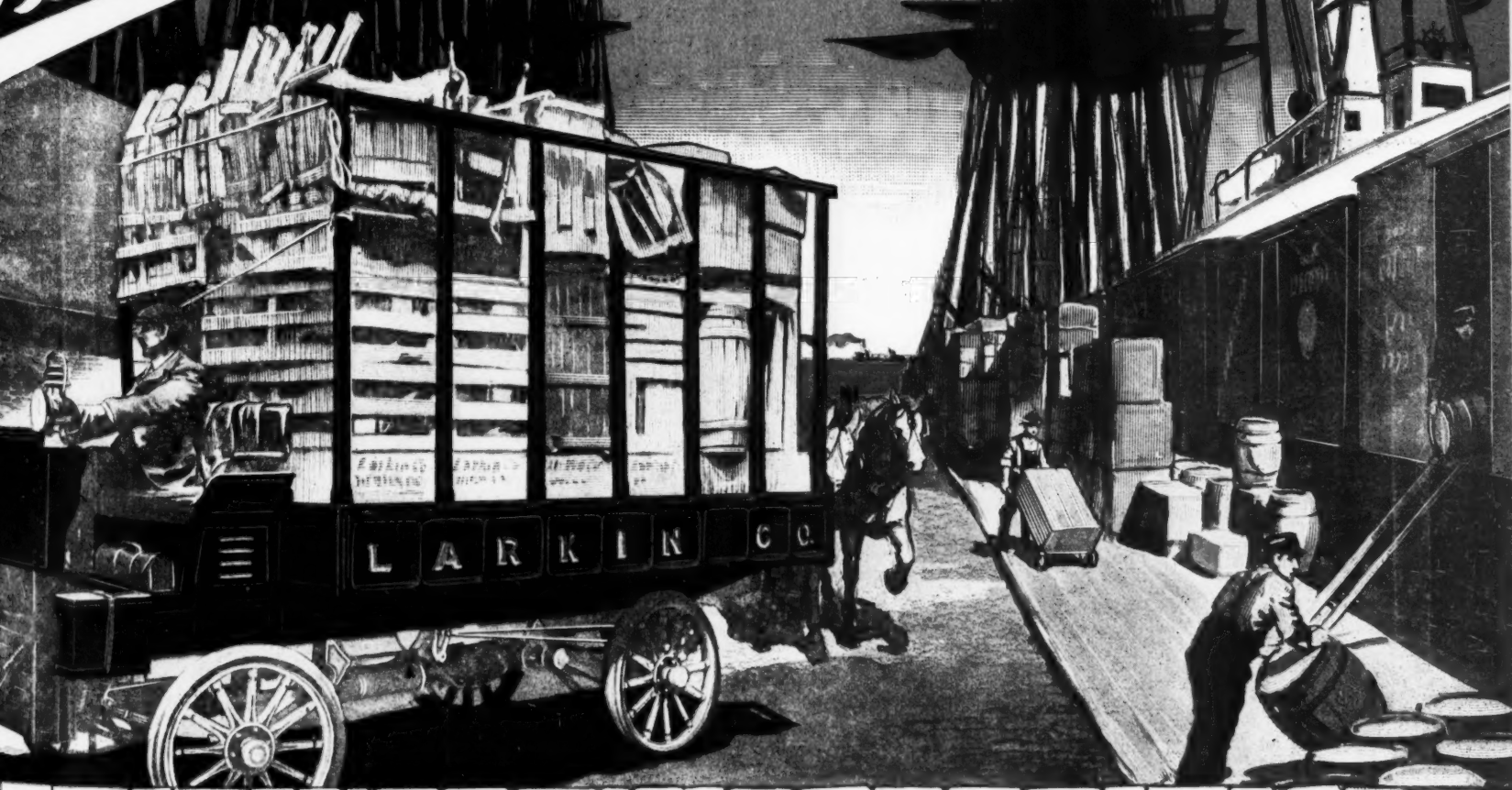
MOTOR AGE

Vol. VIII. No. 4

CHICAGO, JULY 27, 1905

Ten Cents a Copy

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Actual service in the following lines of business has clearly demonstrated the money saving qualities of the Packard Motor truck.

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ARE GOOD TIRES

Reason
1

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\$2.00 Per Year

GLIDDEN TOURISTS FINISH LONG JAUNT



New York, July 22—The Glidden tour for 1905 came to a satisfactory conclusion in Gotham this afternoon and now the contestants must wait until the officials meet in Boston August 2, when the winner of the trophy will be decided and the route for the 1906 tour settled on. Ten of the cars in the tour claim to have perfect records and it will be these the officials will consider. They are: Augustus Post's White, E. H. Fitch's White, Ralph Coburn's Maxwell, B. Briscoe's Maxwell, A. L. Pope's Pope-Toledo, C. E. Walker's Pope-Hartford, George O. Draper's Packard, Percy Pierce's Pierce, R. E. Old's Reo and S. B. Stevens' Darracq. However, these claims cannot be authenticated as only the members of the commission know the standing in the tour. Some of the cars claiming clean records were seen on the roadside. One does not generally rest at the roadside with a monkey wrench in his hand nor does he work over the mechanical portions of his car while enjoying a rest, yet such incidents were seen on 1 or 2 days.

The finishers in New York and their time of arrival were as follows: Walter White, White, 11:57; W. N. Epping, White, 12:01;



ARRIVAL OF GLIDDEN TOURISTS AT NEW YORK

F. L. Woods, Napier, 12:15; E. A. Gilmore, Rambler, 12:20; A. W. Church, Decauville, 12:30; J. D. Maxwell, Maxwell, 1:00; R. F. Kelsey, Maxwell, 1:12; George Otis Draper, Packard, 1:30; A. L. Pope, Pope-Toledo, 1:40; R. M. Owens, Reo, 1:40; S. B. Stevens, Darracq, 2:00; C. E. Walker, Pope-Hartford, 2:00; Benjamin Briscoe, Maxwell, 2:20; W. C. Temple, Pierce Arrow, 2:25; Harold Pope, Pope-Tribune, 2:30; E. H. Cutler, Knox, 2:47; George F. Tyrrell, White, 2:50; Augustus Post, White, 3:25; R. E. Olds, Reo, 3:40; Percy Pierce, Pierce Arrow, 3:46; Carl Page, White, 4:00; Robert Lee Morrell, Locomobile, 4:05; Ralph Coburn, Maxwell, 4:10; Ezra Fitch, White, 8:30; J. C. Ker-

rison, Cadillac, 7:00; Mrs. Cuneo, White, 9:00; Julius Melig, Knox, 10:00.

This, the last day of the tour, was as hard as any of the preceding ones, and there was likewise a big hill to bother the contestants to a considerable degree. Still, take it all in all, conditions were fairly good, but had it rained there would have been a different story to relate and the chances are that the experiences of the famous Pittsburg run would have been greatly discounted. The roads from Lenox to New York, covering a distance of 150 miles, were tough indeed, being thick with sand and having several steep and difficult hills with most dangerous turns on which the height of speed was simply



foolhardy. There were many who took the chance and made speed throughout, reaching Yonkers, and New York particularly, in short time. The reception accorded the vanguard upon its arrival at Yonkers, from which city the tourists paraded to New York, was a hearty one, thousands turning out to inspect the dust-covered men and machines, and to give them a hearty welcome. This was repeated upon the arrival of the party at the headquarters of the Automobile Club of America on Fifth avenue. Few of the participants loitered around the finishing point. They were too tired and weary after their 50 miles of bumping over all sorts and conditions of roads to stop and talk matters over, and each beat a hasty retreat to his hotel, there to enjoy the pleasures of civilization after two weeks on the road.

The run has demonstrated that the American-built machines can do as good work and stand the test as thoroughly and efficiently as the much-heralded foreign article, demonstrated by the fact that all but four of the finishing cars were home product. In the ranks of each, when the roll was called, there was only one of each class among the lacking. The Panhard of Sydney Hutchinson was down and out, having stripped its gears in climbing Jacob's Ladder in Chester on Friday, while the White of Mr. Lamson was missing, owing to his having withdrawn as intended at Concord. Another absent car was that of Mr. Thomas, who withdrew from the tour at Worcester owing to the illness of his wife. So far as can be learned there were no withdrawals owing to mechanical defects and every car stood the test most admirably. No serious accidents occurred during the entire trip, the nearest approach to one being the effort of Mr. Edwards, of Brooklyn, to tear down the bridge in Conway on the way to the mountains. His 24-horsepower Cadillac was not so badly injured that he could not finish the tour this afternoon. The only accident of yesterday was that to Mrs. Harlan Whipple, who was riding on the front seat with her husband when the car struck a double thank-you-marm in Sharon, Conn., throwing Mrs. Whipple out on the roadway. She, fortunately, was not severely injured. The shock was intense but there were no broken bones. Mrs. Whipple, accompanied by her husband, finished the trip to New York on the train. Mrs. Cuneo, the only woman driver on the tour, met with misfortune the second last day of the trip, but by hard work on the part of her mechanic, she repaired damages so that she could finish at a late hour last night. While in Cheshire she had the misfortune to break her driving shaft.

The trip demonstrated that good touring work can be accomplished by the light cars of moderate price. This, it is expected, will do much to place these machines on a much



THE WINNING NAPIER CAR

higher plane. Among the big cars there is no denying the fact that Percy Pierce and his Arrow made a remarkable showing. Not once throughout the trip was this car touched by a monkey wrench or any other tool, it is claimed, and that, too, despite the fact that this particular car made the ascent of Mount Washington. Those who have followed the tour closely are confident that Percy stands the best show of receiving the Glidden trophy. The Pope cars made a good showing, while among the smaller cars might be mentioned the Reo, Maxwell and last but not least the single-cylinder Cadillac, the only one of its kind in the run, which was driven by Secretary John C. Kerrison of the Bay State Automobile Association. This car did remarkably good work throughout the trip and was in such condition that the owner and his family, who were on the trip from start to finish, will start back to Boston over the roads today. The only trouble this car experienced was two dirty spark plugs, a puncture and yesterday weak batteries. Had it not been for the batteries the car would have arrived in New York in ample season to join the parade from Yonkers. The Maxwell cars did excellent work throughout. One of them, that driven by Ralph Coburn, finished with an entirely clean score. The Reos also showed to considerable advantage and there can be no question after the experiences of the day of the reliability of these cars. The only Rambler in the run, that driven by E. A. Gilmore, made a most excellent showing, the only bad mark against it being the breaking of a brake band on the descent of one of the big hills coming out of the White mountains. That might have happened to any other car. The White aggregation appeared strong at all stages of the tour, and great credit is due to the organi-



zation of the White outfit. The Pope company gained considerable credit for the work of the Pope-Hartford, Pope-Toledo and Pope-Tribune cars. They were always among the early starters, and likewise finishers, and it would indeed be difficult to say which of them appeared to better advantage, especially so with the larger cars. The work of the motor trucks, the Packard and the Knox, was astonishing in the extreme and demonstrated that they can do the work on all sorts and conditions of roads. They were of inestimable value to the tourists in

carrying the baggage from point to point, and their work was of value to the commercial world. These trucks completed every mile of the 1,000 of the trip and did it so well that it was seldom that the tourists had to await their arrival in order to change their clothes for dinner. In fact, on several days of the tour, the trucks got in ahead of the pleasure vehicles by quite a margin.

Taken all in all, the tour of this season was a prodigious success. It went over good roads, bad roads, indifferent roads; over level and hilly country, and some of the latter taxed the machines to their utmost. In the future it is to be hoped that the route will not be so long, or the daily time limit of finishing so short. True, it is only necessary to average 10 miles an hour to complete the day's runs. But this was not the fact. There was no allowance for time lost by puncture, the result being that all of the tourists continued riding from start to finish of the day's work in order to have some time to themselves, and that, in case of accident, they would have more time to spend enroute. It was a tour in name only. It was a test in fact and there is little question but what very few if any of the tourists had an opportunity to enjoy the scenery. This is the fact that mitigates against the trip as a tour. As one of the men said, "This is not a tour—it is a test. When I tour at home I take things easy, stop when I want to and go on when I want to, but in this trip it has been ride all the time and I have not loitered enroute."

And his ideas were the same as expressed by many of the others, for, as Chairman Morrell, of the racing board, said, "All the tours this year have been races and all the races have been tours."

Unfortunately, there was a tendency on the part of certain of the tourists to do some racing, but this was limited to a few, and of those fined for speeding in Leicester, hardly one was in what was known among the tourists as the racing circle. In fact, to tell the truth, the majority of them were men with their families. The MOTOR AGE correspondent can vouch for the fact that at no time did any of them get in the racing class. Tonight Mr. Glidden expressed himself as delighted with the way things had progressed

during the trip, and expressed his thanks to Messrs. Post, Tucker and Downs, the three men who worked unceasingly for the success of the tour. Applications for the tour next year have been received from St. Paul, Niagara Falls, Minneapolis and many other cities. The first entry for 1906 was made by Albert Pope, but he recommends that hereafter an official observer be carried on each car competing for the cup.

The last day's run started from Lenox and finished in New York. There was an early start and there needed to be to cover the distance successfully. Previous to the start it was announced that any machine passing through Yonkers before 4 o'clock, the time set for the rendezvous, would be disqualified, but despite this fact Walter White and W. N. Epping took a chance and passed through that town shortly before noon, both of them going direct to New York. The next arrival was Walter Woods in the American-built Napier, which had come along without any trouble whatever. Then came E. A. Gilmore in his Rambler. They waited until the appointed time. The roads to Yonkers were in anything but good condition, that is, so far as the dust and sand were concerned, but there were no misfortunes of any moment. While passing through Poughkeepsie J. D. Maxwell's car skidded into another car not in the run springing the front axles of the Maxwell, so that Mr. Maxwell finished with his front wheels pointing in different directions. W. C. Temple broke the cone of one of his front wheels, but his car finished the day's run.

At Tarrytown-on-the-Hudson, the tourists were invited by the Maxwell-Briscoe Motor Co. to stop and see the sights, the company agreeing to have on tap a barrel of gasoline and several brands of good lubricant.

New York, July 25—Special telegram—Voting blanks as printed by the Glidden cup officials were mailed today, and when the returns are all in they will be sent to Charles J. Glidden and the commission for the meeting in Boston August 2. No driver who missed a control at night or who failed to comply with all the rules set down by the touring committee will be allowed to vote. It was announced today that of those who started on the tour the following will have no vote for the reason stated: Harlan W. Whipple, Peerless, failed to finish Saturday night at Bretton Woods; Benjamin Briscoe, Maxwell, did not continue personally on the entire run; Sidney E. Hutchinson, Panhard, did not finish Saturday night; Mrs. J. N. Cuneo, White, did not finish Saturday night; Edward H. Woods, Napier, did not continue



on the car, the chauffeur driving it to the finish; Walter C. White, White, did not comply with the rule requiring a stop at Yonkers until 4 o'clock and did not weigh in; W. N. Epping, White, did not comply with the rules requiring the stop at Yonkers; Hugh Thomas, Maxwell, retired at Worcester because of his wife's illness; William A. Lawson, White, discontinued the trip at Lowell to complete his vacation in the mountains; R. F. Kelsey, Maxwell, missed the control at Bretton Woods.

TRIP TO CONCORD

Concord, N. H., July 19—In the opinion of those veterans who have participated in every endurance run held in this country, today's trip was by far the hardest ever experienced. The distance of 109 miles between here and Bretton Woods was, with the exception of 6 miles of macadam, over the poorest roads imaginable, up steep grades whose surface was inches thick with mud or sand which caused the majority of cars to use their power on the downward as well as the upward trips. Those who left Bretton Woods before 7 o'clock had the best of it, for those leaving later were forced to ride through a terrific thunder-storm, with lightning striking on all sides of them and the rain coming down in torrents. So heavy was the downpour that it turned usually good roads into perfect quagmires and had a decided tendency to cause side slipping. The rain caused no end of friction trouble. The cars slipped from side to side of the road and more than one driver came dangerously near losing his freight. There is no gainsaying the fact that it was a hard, tough run, one that none of the tourists would have taken for pleasure alone, but one which they covered to-day for the glory, and the possibility of getting the Glidden trophy. The cars were tested to their utmost in to-day's run and those showing clean score are much reduced in number.

The first real test the cars were subjected to was the climbing of Mount Agassiz in Bethlehem. This was but an introduction to the work to come in the climb of Franconia notch. While many of them were on this portion of the trip the rain came down in torrents and then the going was bad indeed. Later on, 7 miles north of Plymouth, the cars reached a steep grade, covered inches thick with slimy mud. This proved a corker for many of the cars. The big Panhard, the Decauville, and several others found it necessary to wait awhile and needed some little assistance to get up the hill. Hilliard, with his Napier, came along and went smiling up the hill. The two big trucks likewise caught a taste of the bad roads. The weather cleared somewhat at this point. There were several narrow escapes from accident during the day. Edwards was the unfortunate, breaking the steering cap of his car. The Packard truck, with baggage aboard, while getting out of the road to permit a horse to go by, got into a ditch and broke a truss rod. This was repaired

by a local blacksmith. The first car to reach Concord was the Knox, driven by President Cutler. Then came Tyrell in the White, followed by Al Pope in a Pope-Toledo. This evening the citizens of this city enjoyed the sight of the tourists and listened to some remarks by Charles J. Glidden and others. The list of finishers at Concord: E. H. Cutler, Knox, 12:05 p. m.; George H. Tyrrell, White, 12:08 p. m.; Albert L. Pope, Pope-Toledo, 12:55 p. m.; Charles E. Walker, Pope-Hartford, 1:14 p. m.; Ed H. Wood, Napier, 1:18 p. m.; J. D. Maxwell, Maxwell, 1:20 p. m.; Harold L. Pope, Pope-Tribune, 1:21 p. m.; Benjamin Briscoe, Maxwell, 1:36 p. m.; Samuel B. Stevens, Darracq, 1:55 p. m.; G. O. Draper, Packard, 2:48 p. m.; Mrs. J. N. Cuneo, White, 3:23 p. m.; W. N. Epping, White, 3:24 p. m.; Walter C. White, White, 3:37 p. m.; Augustus Post, White, 3:43 p. m.; Carl H. Page, White, 3:43 p. m.; Julius Mohlig, Knox, 3:50 p. m.; R. M. Owen, Reo, 3:50 p. m.; R. E. Olds, Reo, 3:58 p. m.; W. C. Temple, Pierce, 4 p. m.; Percy P. Pierce, Pierce, 4:30 p. m.; S. E. Hutchinson, Panhard, 4:30 p. m.; Ralph T. Coburn, Maxwell, 4:40 p. m.; E. A. Gilmore, Rambler, 5 p. m.; Ezra H. Fitch, White, 5:05 p. m.

RUN TO WORCESTER

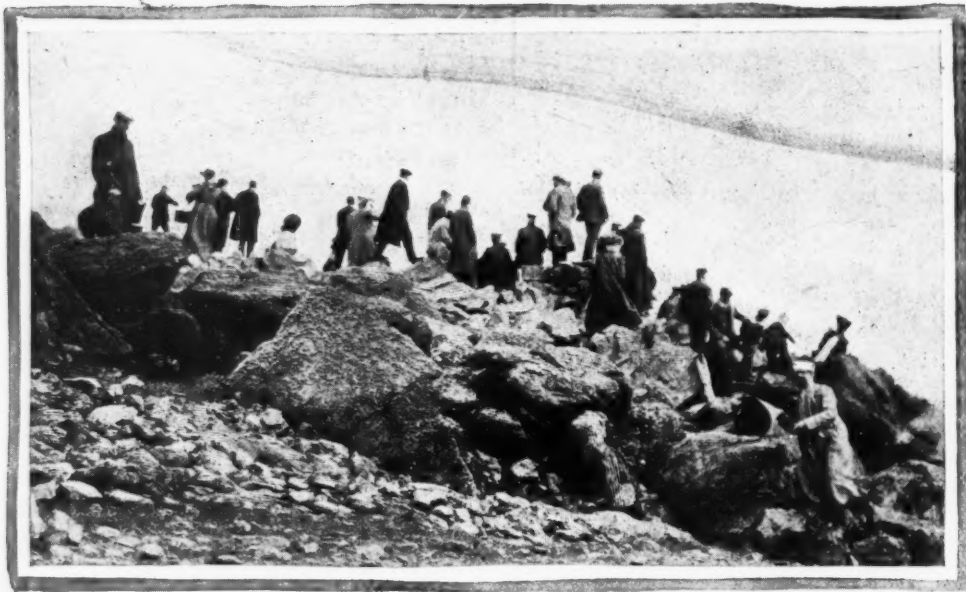
Worcester, Mass., July 20—Today's run was from Concord to Worcester, a distance of over 100 miles. It was quite easy compared to the trip of the previous day. The roads from Concord to Nashua were not so bad, while those from that city to Worcester improved immensely so that the latter portion was covered over macadam roads. There were two accidents during the day, one to A. E. Dennison, who was driving President Cutler's Knox car. While passing along the road just outside Nashua the car skidded in the soft sand and into a lumber wagon, Dennison was thrown out and suffered a fracture of one of the toes on his right foot, which was the only injury received by any of the party. The bonnet of the car was smashed considerably, but that was all. The second occurred to the driver of a mowing machine, the horses attached to which took fright at an approaching car and ran away. The driver, James Spaulding, received internal injuries. All of the cars made excellent records during the run, there being a remarkable freeness from punctures and similar troubles. The police were on the lookout for those who would violate the speed law and the first man to fall into their clutches was George Otis Draper in his touring Packard. He admitted the crime and paid a fine of \$15, which he said was worth



THE TIMERS AT THE TELEPHONE



MOVING-PICTURE MEN AT WORK



CROWD AT SUMMIT WATCHING FINISH OF TRIALS

the price. A police official in Boylston stopped the George's Richard-Brasier, which was not in the run, and started to arrest the driver. Not having sufficient money in his pocket to pay a possible fine he threw in his clutch and started for Worcester, going by like a shot, leaving Mr. Policeman wondering why. Upon the arrival of the party in Worcester Sheriff Quinn of Leicester, called upon the outfit and served warrants for fast work in Leicester upon the party, namely, Robert Lee Morrell, W. C. Temple, Carl Page, Ezra Fitch, J. N. Cuneo and R. E. Olds, the two escaping the serving of warrants being Charles Jerome Edwards and R. M. Owens, who happened to be on the roads when Constable Quinn arrived.

The Worcester Automobile Club certainly did itself proud in its entertainment of the visitors. Its handsome quarters in the Bay State house were thrown open to the visitors and later in the evening every one was entertained at the theater as the guests of the club. The order of finishers was as follows: George Otis Draper, Packard; Walter White, White; S. B. Stevens, Darracq; E. H. Woods, Napier; J. D. Maxwell, Maxwell; R. F. Kelsey, Maxwell; George H. Tyrrell, White; A. L. Pope, Pope-Toledo; Mrs. Cuneo, White; W. N. Epping, White; E. A. Gilmore, Rambler; Augustus Post, White; Carl H. Page, White; A. W. Church, Decauville; C. E. Walker, Pope-Hartford; W. C. Temple, Pierce; J. C. Kerrison, Cadillac; S. E. Hutchinson, Panhard; Harold E. Pope, Pope-Tribune; R. M. Owen, Reo; Ezra H. Fitch, White; R. E. Olds, Reo; W. N. Epping, White; Percy Pierce, Pierce; Harlan Whipple, Peerless; R. Lee Morrell, Locomobile; Ralph Coburn, Maxwell; R. E. Olds, Reo; B. Briscoe, Maxwell.

COURT TROUBLES AT LENOX

Lenox, Mass., July 21—There was a late start made by most of the cars in the run from Worcester to Lenox, the delay being caused entirely by the court proceedings against those arrested the previous day. The motorists in a body visited the local courtroom, heard the story of Officer Quinn, and then heard the judge impose a fine of \$15 on each one of the so-called "convicts." The tourists then got aboard their cars and started for the limits of Leicester. Here a halt was called while the brass band had an opportu-

ity to form in front of the motorists, who, three abreast, paraded slowly through the town. The band played every dirge it could think of and the natives had as much fun out of it as did the motorists, the majority of whose cars were draped in mourning. Upon arriving at the residence of Constable Quinn the party halted and the band played "Teasing;" then came the dash for Lenox. It was a dash to say the least, all the cars going along at a rapid rate, reaching Springfield before the noon hour. A halt for lunch was made here. A hard climb was experienced just outside of Cheshire. It was the ascent of Jacob's Ladder, the hill which in the past had been particularly hard for all to conquer, and which a year ago caused the members of the Automobile Club of America considerable difficulty in climbing. All of the cars got up with more or less ease, but few if any on their high speeds. The work of the little cars in this climb was astonishing, the Maxwells, Reo, Pope-Hartford and the single-cylinder Cadillac making the climb on their low speed, and without as much assistance as was necessary with one or two of the high-powered cars. It was while endeavoring to climb this hill on a high speed that the Panhard stripped its gears and was put out of the running, it being the first car to fall by the

wayside from any such trouble. Mrs. Cuneo, whose car turned turtle on the first day of the run, broke its driving shaft before she reached the hill, and the greater portion of the night was spent repairing the damage. The first car to reach the Aspinwall, headquarters for the night, was the Napier, which arrived shortly after 11 o'clock and was followed by Albert Pope in the Pope-Toledo and his confreres, Walker and Harold Pope, both in Pope products. The order of finish for the day was as follows: Col. E. H. Woods, Napier, 11:05; A. L. Pope, Pope-Toledo, 11:50; C. E. Walker, Pope-Hartford, 12:28; H. L. Pope, Pope-Tribune, 12:29; E. H. Cutler, Knox, 2:48; S. B. Stevens, Darracq, 2:52; C. W. Kelsey, Maxwell, 2:53; J. D. Maxwell, Maxwell, 2:53; E. A. Gilmore, Rambler, 3:32; G. H. Tyrrell, White, 3:36; W. C. White, White, 3:45; J. C. Kerrison, Cadillac, 3:50; W. N. Epping, White, 3:58; C. Page, White, 4:30; G. Otis Draper, Packard, 4:38; B. Briscoe, Maxwell, 4:48; W. C. Temple, Pierce, 5:12; P. Pierce, Pierce, 5:12; A. Post, White, 5:23; R. E. Olds, Reo, 5:23; A. W. Church, Decauville, 5:27; R. Coburn, Maxwell, 5:28; J. Mehlig, Knox, 5:38; E. H. Fitch, White, 5:40; R. M. Owen, Reo, 5:43; H. W. Whipple, Peerless, 5:54; R. L. Morrell, Locomobile, 6:49.

TRIP OF PACKARD TRUCK

Mount Washington, Bretton Woods, N. H., July 19—The story of the Packard baggage truck, as told by Chauffeur W. J. Birmingham, is as follows:

"Tuesday morning, July 11, we started on the Glidden tour through the White mountains, as baggage wagon. Our aim was to have all baggage at the stopping places by noon so the tourists could have their baggage upon their arrival. We left the office of the Packard New York branch at 2 o'clock Tuesday and drove over the beautiful roads of New York state, at an average of 12 miles an hour, arriving at Hartford, Conn., during the middle of the forenoon, on Wednesday, unloading our baggage at the Allyn hotel. We found we were the first machine in. The truck acted as if it understood its mission, running without an interruption and giving no trouble whatever. We stopped once and put one small pail of water in our tank. The first day of our trip we carried three trunks, thirteen dress suit cases



WHERE THE CARS ENDED THEIR LONG CLIMB

and twelve boxes of camera plates. We also carried a small amount of gasoline and cylinder oil.

"At Hartford, Conn., we stopped till early the following morning, when we left for Boston, 121 miles away. As we were running on schedule time we took good notice of the clock and were gratified to find that we inevitably came to our stopping places ahead of schedule. The truck gave us no trouble, leaving all our time for recreation. Early Thursday morning we left Boston for Newcastle, N. H., 63 miles. Our trip now took us through a more rolling country. First we left Boston across one of the bridges, through the large marshes, which are 4 miles in width, and on to the rolling country. Our baggage increased two suit cases at Boston. We had quite an amount of sandy roads between Boston and Newcastle, but the truck did not seem to notice it in the least. After leaving Newcastle we had our first ill-luck in the shape of a hard rain for about 2½ hours, which rendered the roads very heavy and slippery, but we did not stop our trip for all that. We had a climb from the sea level to 2,500 feet during the 108 miles of this relay of the journey.

"As we did not get such an early start Friday we were overtaken and passed by a number of touring cars, but upon arrival at the Mount Washington house, Bretton Woods, we were congratulated on getting over such roads in such fine shape. Here we found from our record that we had been easily averaging 12 miles, with our load of baggage and the four of us who were taking passage on the truck. We had averaged 1 gallon of gasoline and ½ pint of cylinder oil to each 11 miles. We rested until Sunday noon, when we took the truck and eight fellows and started for the Glen house, the beginning of the climb. We went 30 miles to the mountains to the Glen house, where we stopped for refreshments. Then began the climb to the highest point of land in the eastern part of North America. We started well and went steadily on and up the mountain. We stopped for water twice in the 8 miles and had no trouble with our motor. We encountered a rain on the way up and as the road became slippery we were compelled to put small chains on our rear wheels. Our road was stony and in some places sandy. Our motor drove with such good effect that it ground our wheel chains in several places. Our only other trouble was a hard sleet storm which we encountered. Despite this we arrived at the summit in fine condition. We carried seven men the greater part of the 8-mile climb of continuous steep grades, some of which were 1-foot rise to 3 feet of distance. We now claim to be the first truck to ever climb Mount Washington."

CERTIFICATE WINNERS

New York, July 26—Special telegram—Following is the official list of those receiving Glidden certificates for complying with all the requirements of the tour: W. C. Temple, R. M. Owens, Augustus Post, J. C. Kerrison, C. H. Page, S. H. Fitch, G. O. Draper, E. H. Cutler, A. W. Church, S. B. Stevens, R. E. Olds, W. N. Epping, Percy Pierce, Harold L. Pope, Ralph Coburn, C. E. Walker, Albert L. Pope, J. D. Maxwell, E. A. Gilmore and Walter C. White. The Knox and Packard trucks will receive special certificates.

OPPOSED TO CUP EVENT

Leading Motorists of Europe Willing That International Race Be Discontinued

London, July 14—The historian has finished his work and the last chapter of the sixth renewal of the Bennett cup event has been written, but still the gossips of the motoring world are busily engaged in discussing the international race. What interests them most is whether or not the game is worth the candle; if it would not be far better for the manufacturers to devote their time, energy, brains and money to the improvement of the motor car from a commercial and touring standpoint rather than work their fingers off to produce huge road locomotives, with speed, and only speed, their aim. That the mind of the public is switching is evident from interviews gathered by one of Great Britain's trade journals, which has felt the public pulse and carefully asked the powers that be of its own land as well as some of the more prominent in other countries if the big race should be continued. With only a few exceptions the answers have been in the negative.

None other than the Hon. Arthur Stanley, chairman of the Automobile Club of Great Britain and Ireland, votes against the international contest.

"In the early days of motoring it may have stimulated competition and it undoubtedly did a certain amount of good," the chairman writes, "but now, when vast improvements have taken place in motors and there has been no corresponding improvement in the nature and condition of the roads, I fail to see that any useful purpose is served by the race. We know that cars can be made which can do over 100 miles an hour, and we know that no roads are calculated to take such traffic as this. It is therefore not a true speed test; in fact, it is nothing more or less than a question of luck. Hill climbing and efficiency tests are not only true sporting events, but are of real benefit to the industry."

Prince Pierre d'Arenberg, of the Automobile de France, straddles the fence and returns a noncommittal reply in which he says he will always support the decisions of the racing committee. Count von Sierstorff, of the German Automobile Club, speaking only for himself, is against the continuation of the race. He thinks the event has served its purpose and that the true merits of the cars nowadays cannot be decided by such a contest. From a trade standpoint, he says that the Brasier people did not receive any more orders through its victory last year than did other leading makers.

Sir Arthur Harmsworth is against speed contests and Colonel R. E. Crompton thinks the race distracts the attention of leading designers from the real matters which need improvement. The colonel believes that the only way in which touring cars have been benefited by road racing has been in the strengthening of the wheels and the attachments of the tires to resist the side strains of turning sharp corners at high speed. He holds that if it had not been for racing cars there undoubtedly would have been a return to the higher wheels and higher hung bodies of the earlier cars. Such cars, he thinks, if built nowadays with the improvements that

have since suggested themselves, would certainly result in less dust throwing and greater comfort to the tourists.

S. F. Edge, who won the cup for England in 1902, is one of the few sticking up for a continuance of the event which made him famous in a motoring way. "In my opinion the Bennett race should be continued, but from year to year it should be modified by reducing the amount of weight to which the makers have to build their cars to come under the regulations," Edge says.

"Speeds of racing cars are now so greatly in excess of practical road speeds that the experience gained by the racer is of little, if any, value in the construction of the common motor car," says W. G. D. Goff, chairman of the Irish Automobile Club. "Personally I should prefer to buy from the firm which devoted its time and money to the development of the car of commerce."

C. Jarrott, M. Mors, Marquis de Chasseloup-Laubat, Chevalier R. de Knyff, J. E. Hutton, E. H. Cozens-Hardy and Lieutenant-Colonel Mark Mayhew also aired their views in the matter.

New York, July 26—Special telegram—American views on the continuation of the Bennett race are given by officials of the American Automobile Association:

"I do not think the Bennett race has at present much influence in the development of the automobile," said Robert Lee Morrell, chairman of the A. A. A. racing board. "In its incipency the race had much to do with the advancement in automobile construction. I think it has very little now. I look on racing rather as an out and out sport of interest to competitors and spectators, than as experimental test of construction. I do not think the Bennett race has any influence on American makers. With the Vanderbilt race, I think it will be different. The withdrawal of the French club is certainly a violation of the rule of sportsmanship, which demands that the winner shall give the loser another trial."

"The winning of the international race is unquestionably a big advertising asset upon which the maker realizes in a substantial degree," says Secretary Batchelder. "While the public remembers the names of the winning car and the driver, its memory is short concerning those who fall by the wayside, and in consequence the injury to the beaten concerns is not very appreciable. France, by retiring from the Bennett race, will injure herself more than she would by defending her laurels and being beaten. Business interests and not true sportsmanship are responsible for France's attitude and one might question from a purely business standpoint if this attitude is good business."

GARAGE FIRE IN MINNEAPOLIS

Minneapolis, Minn., July 21—Fire broke out last night in the garage of George W. Caplin at Fifth street and Fifth avenue south and did considerable damage. The loss on the building will approximate \$2,000, fully covered by insurance, while two Wintons and a Royal Tourist were so badly damaged that unless there can be a slight salvage on the engines they will be a total loss. These three cars alone were valued at \$8,000. A Locomobile, a Mercedes, a Marion, a Columbia and three Royal Tourists were scorched. In all there were fifteen cars in the building. A lighted match caused the fire.



MAKING AN EARLY START

IF indications are at all correct the American makers are already hard at work finishing and testing their 1906 models so as to be ready for a hard campaign for the coming year—one that will probably put the last nail in the coffin of the foreign-built car as a factor of any great magnitude in American trade.

The American maker has been pounding away at the door of success so hard that in a very few short years he has made his knocks felt and his countrymen have come to the point of realizing that he is in business and proposes that other countries shall not supplant him in the home market, even if for a time they may in the markets abroad, and this is by no means a sure thing. Gradually the American car is finding favor all over the world and is slowly but surely running the foreign cars out in all but the countries of home manufacture.

This early beginning on the next season's output will have the effect of permitting the home market to receive its supply in season and will also permit a still harder foreign crusade, one that in the next year will be felt more by makers of other lands than it has in the past.

American makers are, happily, of a different turn of mind from those abroad. They have many different ideas as to construction, and thereby are in a position to satisfy almost any demand that may crop up, whereas the foreign makers are practically of one mind, except as to mere details. The four-cylinder car is the car abroad, but not so here, though it must be admitted the tendency is rapidly turning toward this pattern. A number of makers who heretofore made one, two and three-cylinder cars have practically abandoned these patterns for the four-cylinder exclusively. In fact, the coming season will find few, if any, three-cylinder cars, and the number of two and one-cylinder cars will be reduced unless new makers come into the field and begin on the smaller cars as an experiment.

Beyond this there appears to be little prospect for any radical change except, possibly, in minor matters of construction and in ignition, a subject that has received scant consideration on the part of the American and which has always been one of the greatest importance. It is reported on good authority that one prominent maker has already contracted for a large supply of foreign-built ignition high tension magnetos and proposes to equip most of his cars therewith. The subject of ignition has received large consideration during this season and next year's shows will likely see many improvements in this direction.

Styles have been brought to that point where by there seems to be little improvement an-

ticipated or desired and those of the present day will probably be with us at least another year, with improvements in details only; in fact, a number of the 1906 cars which have already been brought out show no decided changes so far as the ordinary eye can detect. Power is being increased, bodies are being made larger and more sumptuously fitted, weak spots are being strengthened and ignition methods are undergoing improvement, but in general the changes are not noticeable to any but the keen eye of the expert.

THE PEDESTRIAN'S DUTY

ON finding a motorist not guilty of the charge of manslaughter, for having run down and killed a pedestrian in Los Angeles, Cal., a jury practically determined that a pedestrian had no right to cross a road at other than street intersections. Whether this is good law or not would depend upon the particular state supreme court which might be called upon to pass on the question, inasmuch as state supreme courts seem to have a very decided difference of opinion when the same principle is involved. But this decision of the jury is good sense in these days of transportation on the highways by motor power. A railroad is not responsible when a pedestrian is on its right of way at other than regular crossings, and then the pedestrian must not be guilty of negligence. A pedestrian should not cross a road in a crowded city except at street crossings and then it is his or her duty to avoid being negligent. The motorist is not relieved from his duty, however, and though the pedestrian is negligent the motorist must do all in his power to avoid accident.

RETAILERS ORGANIZE

THE organization of the automobile dealers last week at Buffalo is not the first attempt of the selling agents of the country to get together to change certain matters pertaining to the retail business or at least to better their own conditions. Retail organizations have been formed in all the important centers and at least one national organization was organized, made a splurge for a time and then ceased to be heard of to any considerable extent. Whether the latest affair to come into being will find a similar fate remains to be seen.

There are, doubtless, many things which can be accomplished by the retailers providing there is a strict holding to the rules or laws of the body, but heretofore so many backsliders have been found that it took but a few months for other members to see their folly in sticking to such an organization and they, too, dropped the work.

The new organization, it is reported, proposes to have something to say to the makers about deliveries and other things, such as supplying all cars ordered or refunding the profit that would have been made on cars not delivered by the makers. There is none too much hope that the makers will take this calmly, for as long as the makers are pushed for delivery and cannot supply the demand there will be little trouble for them to find agents who will be satisfied to take what they can get.

It is not, however, reasonable for the makers to demand that an agent agree to take a particular number of machines and make him take them if the maker can deliver them and to give the agent no recourse in case the machines are not delivered within the selling season. That is a pretty sure thing for the maker, but nothing very certain for the dealer; it may be fair enough when the demand is intense, but a little slump would probably put a good many dealers out of business entirely.

The agents' association will stand somewhat in the light of a union and unless it handles its case with extreme care it may find itself in the boat that the Chicago teamsters have been placed—it may find it has gained nothing and possibly has lost a good deal that it once had. There is risk on both sides of strong organizations, just as there has been in the case of the employers and the unions.

The new association proposes to take a hand in the matter of price-cutting and thereby tacitly admits that even some of its members have been guilty of selling at any price to dispose of stock. If it can prevent price-cutting it will accomplish one thing that may be the very means of preventing the industry from degenerating to the point reached by the bicycle industry.

NOW FOR GOOD ROADS

UNDER the scheme proposed by an ex-member of the Massachusetts legislature, motorists can have good roads any time they want them. All they have to do is to get out on the Bay State highways, pull the throttle wide open and trust to some wideawake constable to catch their numbers as they whiz by. The justice will do the rest and the fines accumulated this way will go to the state highway commission, which will turn the coin of the realm into good macadam roads. In a nutshell, ex-Representative Doty, of Waltham, Mass., seems to have solved the good roads problem with his proposition that all fines paid by the scorchers go to the maintenance of good roads in the state instead of into the town treasury where the pinch is made.

When one considers the possibilities under such a system, he naturally is impressed with its feasibility. Doubtless the constable and justice as well as the selectman, would howl at cutting off their perquisites, but their voices will be as the wail of a yellow dog run over by a car traveling 50 miles an hour.

Just think of it! The bigger the fine the better the roads and the better the roads the bigger the fine!

The highway commission gets more money by making better roads, offering temptations to scorchers that they cannot resist; they exceed the speed limit and pay the fine and the roads are improved by the enforced assessment. To live up to their reputations as road makers motorists will have to scorch.

Jump Sparks

Anyhow, Mr. Glidden has a good press agent.

If Earl Kiser can put his Bullet into the Green Dragon at Toledo he can pose as the modern St. George.

To give up or not to give up the Bennett race is now as live a topic with many makers abroad as was the question who would win it a month ago. All of which is in line with the suggestion of MOTOR AGE that racing does not pay.

What next? The following has been clipped from the Times, published at Fostoria, O.: "Automobile binders will be used in the wheat fields around Fostoria next year. This summer the binders could have been attached to steamboats to great advantage."

Even before the factories have ceased to turn out 1905 cars the public is clamoring for 1906 makes, which would tend to show that hard times are not to appear within the next few months at least and that the demand for automobiles is by no means on the decline.

The St. Paul tour has been called a failure. Well, perhaps it was, and so was every other affair of similar nature when run midst downpours of rain and seas of mud. All of which proves that it is dangerous—or at least unwise—to attempt following any sort of a schedule as to time.

The day is rapidly approaching when all automobilists in this country will welcome something on the order of the League of Considerate Motorists, just formed in Great Britain. The name tells the whole story, and if there is a desire to get away from this particular name an organization might be called the League of Decent Motorists. This body was organized by those who respect the rights of others and who have the game of automobiling at heart. On the membership roll there are no reckless or inconsiderate motorists or scorchers. Such a body has an immense field in all parts of the United States, from the crowded cities to the little country towns, and some such organization will be about the only thing that will tend to keep the curse of the non-automobiling public from the automobiling world. The idea is good if for no other purpose than to show that all people are not reckless.

THE WEEK

President Jaynes, speaking for new National Association of Automobile Dealers, declares war on makers is not object of agents; that organization is intended to work good for all interested parties and that some changes in trade methods will be asked for.

Glidden tour comes to an end in New York Saturday, but announcement of the winner of trophy will not be made until officials hold meeting in Boston, August 2, when claims of contestants will be investigated.

Announcement that Ford agencies in New York and Philadelphia have been taken from John Wanamaker believed to mark retirement of big department store magnate from handling automobiles at retail.

Prominent English, French and German motorists air opinions on advisability of abandoning Bennett cup race, Britons being loudest in claims that international event has outlived its usefulness.

Outing for orphans as promoted by the Cleveland Automobile Club proves to be biggest affair of its kind ever attempted, 1,000 poor children being given rides in automobiles and a picnic in park.

Federation of American Motorcyclists announce a unique card of events for annual meet at Waltham, tests out of ordinary being provided for.

Dr. H. E. Thomas and others working on plan for a chain of club houses in various sections of Chicago for new club they are organizing.

Week of motor sport at Ostend results in several records being broken, among them new motor cycle marks by Guiponne.

Railroads decide to ship automobiles in less than car load lots at first-class instead of three times first-class rates.

Stover Mfg. Co., of Freeport, Ill., announces intention to manufacture Phoenix automobiles.



SCORCHING MUST CEASE

SCORCHING in violation of municipal laws governing the speed of automobiles on the public highways, and reckless driving, must cease. It is fast becoming a menace to the industry and to the public, and the latter, like the worm, will turn in no measured terms.

MOTOR AGE has set its disapproval on scorching and recklessness; its next move will be to aid in the conviction of all automobilists who are not constrained to conduct themselves in such manner as to at least not meet with the disapproval of the public in general.

From published reports the Glidden tour resolved itself into a scorch and the contestants boasted of the times made from one place to another, the makers represented being probably the worst offenders in their desire to do a little quiet advertising, probably not realizing the fact that they are most interested in the decent conduct of motorists and that they should set example to others.

Condemnation all along the Glidden tour route has come from the public press, the municipal officers, the drivers of horses and from pedestrians. Where there is smoke there is fire, and the published reports of the times made only confirm the complaints that have been made in many places.

The ultra conservative speed laws enacted in many states, and more particularly in municipalities, are the direct result of the doings of these speed bugs, and any community is hardly to be blamed for taking drastic action to compel a decent regard for the lives of the users of the public highways when driving or walking on them.

It is not always excessive speed that is responsible for accidents, but it is safe to presume that if the speed of automobiles is kept within the limit set by law the number of accidents will be materially decreased and the public, instead of condemning the victim will give vent to a reasonable amount of sympathy. But as long as a Glidden tour is conducted on the lines of a scorch, such sympathy will not only be withheld but the entire automobile public will receive condemnation which it does not deserve.

The public and the lay press have taken up the cudgel and are swinging it with no mean force; the public insists that scorching must stop, and as a rule when the public rises in its wrath something happens.

Automobilists are warned once more to check their mad desire to rip out 25 to 40 miles an hour lest they carry themselves and their brother motorists into far greater disrepute than the motoring public is now held.

If a few more trade associations get into the field there will naturally be some sort of an eliminating trial.

France, winner of the Bennett cup, and with her proposed grand prix for 1906, is likened to Aladdin and his "old lamps for new."

It looks as if the Glidden tour commission and some of the tourists themselves may be saying to one another: "You're another!"

Reporter to Barney Oldfield: "How does it feel to go a mile in 53 seconds in an automobile?"

Barney Oldfield to Webb Jay: "Webb, how does it feel to go a mile in 48½ seconds in an automobile?"

Surely if Thery, Lancia, Nazzari, Caillois, Jenatzy, and a few other foreign drivers take part in the Vanderbilt cup race there will be something doing, and already Americans are bewailing the fact that the cup will go abroad. Without more confidence than this, it surely will go.

Somehow or other those Coloradoites seemed to know that this would be the last of the Mount Washington climbs, and thought they would bob in with the Pike's peak climb as a substitute. As a matter of fact, they forget Ever-Searching-for-a-Course Morgan. The senator will be on hand with one when next season rolls around.

The number of 1906 machines that are being tried out would indicate that the makers are not to be caught without early delivery stock the coming season, as many were early this year. If the truth were known probably all of the makers have had new machines on the road for tests for a month or more, all unknown to the trade.

France made a great big bluff before the Bennett race because she feared she might not capture the event—and she came near not doing so—and now she thinks she must make good by not taking part in the race next year. The question is: where will the race take place? The rules provide it shall take place in the country which furnishes the winner, and as Thery won it, it naturally would be held in France. France will have to give up all claim on the cup and let next year's race go elsewhere, or she will have to withdraw her bluff and lie low.

WAR NOT AGENTS' OBJECT

National Association of Automobile Dealers, Says President Jaynes, Is Organized for Good of Maker, Middleman and Buyer—Retailers Want Change in Trade Methods

Buffalo, N. Y., July 24—Confident now that their organization, the National Association of Automobile Dealers, is sure to have a bright future the officers are willing to say more about the association and its aims than they were while it was in process of formation. Two months or so of hard work preceded the meeting in this city a week ago today. Hundreds of letters had been written and a rather careful inspection of the replies received shows that at the start-off fully three times as many dealers as were present at the first meeting had expressed themselves as being heartily in favor of any action which the majority at the meeting might take. The tone of the letters bears out fully the statement that the dealers were all ready for organization.

That, in fact, was the first point made today by President W. C. Jaynes when he was asked to speak to MOTOR AGE about the dealers' movement.

"Here's a business in which I myself have been engaged for 5 years, some men even longer, a business which is constantly growing and demanding the investment of more capital and the employment of more labor, yet until now we have had no national organization. Isn't it entirely natural that under the circumstances we should get together? I fear some may have a wrong impression about our organization because it has been intimated, if not asserted outright, that we have banded together for the purpose of fighting the manufacturers. Ours is not to be any 'big stick' game. When our association has decided that it wishes to ask for anything from anybody the request will be made, not as formerly by an individual dealer, but by a body, which I am sure in a very short time will number among its members practically every important licensed retail automobile dealer in the United States.

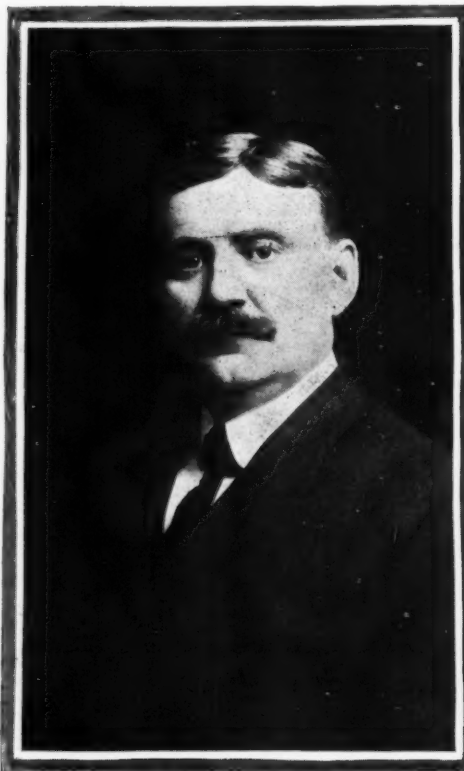
"We have not declared war on anybody. Ours is a big business in which we are vitally interested, and we believe that by banding together we shall be able better to accomplish a good work not only for ourselves but also for the manufacturer and for the buyer of motor cars."

"What, for instance," was asked, "are some of the things which you might do for yourselves?"

"Well, the papers have it that we are planning to ask for a larger discount from the manufacturers. I am not prepared to say that such is the case, for we naturally didn't do much in those 2 days last week except to get the organization perfected. We did that well, however, and now we are ready to do the things which may come up from time to time. Whether we shall, as a body, ask the manufacturers to grant what many individual dealers have been wishing the manufacturers would grant—a margin of discount which will correspond with the increased expenses of our business—remains to be seen.

"The automobile business is constantly changing in that it is being concentrated in

almost every city in the business section where rents are high. Large buildings are demanded by the business even if no attempt is made to conduct a garage in connection with a retail store. Our fire insurance is at a high rate. We must carry liability insurance. Every year our salesmen demand higher salaries as they become more expert, and even our repair men ask wages which, on the present basis of charges, leaves nothing at all for the man who takes the risk and has his capital invested in the business.



W. C. JAYNES, PRESIDENT N. A. A. D.

Not only that, but there is a constant drain in the way of undoing the mistakes of people who buy the cars. A great many of the purchasers are inexperienced and there is never an adequate supply of competent chauffeurs. Hence, although a dealer may be selling the best car in the world and one which is absolutely all right, it will need fixing from time to time simply if for no other reason because the people who have it don't know how to operate it right. It could not be expected that every point about a business so new comparatively as the automobile business could be adjusted correctly at the start. Yet there has been very little change in the conditions which the manufacturers set for the retail agent, although there have been big changes in the condition which confront the agent on the other side. There is undoubtedly a feeling among the retailers that some things can be adjusted with the manufacturers in such a way as to make the business better all around.

"Some dealers feel, for instance, that the present method of buying cars might be altered to make it a bit more fair to the re-

tailer. When we order cars from the manufacturers we pay a percentage down. The money comes to the manufacturer at a time when he needs it in his business and it goes from us at the very time when none is coming to us. The maker promises to deliver a car, say on May 15. When the time comes he tells us he cannot ship it before June 15. The customer says he'll not wait, he knows where he can get a car at once and he'll get it. There goes the sale. If we countermand the order we get back the deposit, which must be paid to the customer when his order is cancelled. We are out the whole expense of making that sale and of maintaining the store in which to make the sale. In fact, we have paid good money for the privilege of not doing business. Some dealers undoubtedly think that a fairer arrangement would be that the manufacturer should pay back not only the deposit but something more to partly cover the expense we were put to in the deal which fell through.

"A frequent cause of dissatisfaction among the buyers of motor cars is the method of selling cars without full equipment. A dealer quotes a price on a car and perhaps nothing is said about the equipment. When the customer comes to get the machine he may want a top and a lot of other things, and if he does not know the custom of the business he will think it strange that he is asked to pay for a top and for the other equipment. He is likely to think that he is being done at the very start. If the manufacturers would fix prices which included equipment some of the dealers' trouble would be removed."

How will your association go about it to introduce these desired changes in conditions?

"We will formulate our wishes and then in amicable conference with the manufacturers we shall endeavor to show them that our interests are theirs. You may feel assured that no spirit of bluff or four-flushing will dominate the association. We shall have in our membership the best men in the retail business and whatever we do will be only after mature deliberation. Of course, you mustn't get the impression that all we are organized for is to treat with the manufacturers. We may find plenty of places where we can bring about improvements in matters with which the dealers themselves have most to do. I should not be surprised if the association should pay some attention to the matter of cutting prices and should expect, of course, that the action of the association would be entirely on the side of keeping strictly to the schedule prices. The association may find something to do in the way of protecting territory or rather in preventing invasion of one agent's rightful territory by another. Another thing which many of us would like to see would be more uniformity in the prices of certain supplies, for instance, gasoline, and in charges for taking care of cars.

"Of course all this is not a very definite statement of program, but I cannot at present make the specific statement that we are to do this or that because, as I have said, we have thus far simply perfected our organization. Whatever we do will be with the idea of improving the condition of the business in every way. We are between the manufacturer and the ultimate customer, and

if we do well for ourselves we will be doing well for the buyer and for the manufacturer. We are not filled with animosity toward any one and we are not looking for trouble. We are looking for all the business that can be had legitimately."

Mr. Jaynes is president of the W. C. Jaynes Automobile Co. of this city. He was one of the pioneer automobile dealers of Buffalo, having bought out the Locomobile agency in 1901 after he had been in the bicycle business for several years. He started with the Oldsmobile and Winton in addition to the Locomobile and at present handles the Oldsmobile, Winton, Pope-Hartford, Pope-Tribune, Pope-Toledo and Buick. The large Jaynes garage was the first of the modern garages in this city and since it was built the bulk of the automobile and tire business has concentrated on upper Main street near the Jaynes establishment. Mr. Jaynes was one of the prime movers in the organization of the Buffalo Automobile Trade Association, was the promoter of the first automobile show held in this city in 1903.

William H. Baker, counsel for the association, is counsel for a number of automobile firms in this city, and for the Automobile Club of Buffalo, of which he is also a governor. He is an enthusiastic motorist and drives a Pope-Toledo car. Mr. Baker was a pioneer bicycle enthusiast, having begun his riding in 1876. He was president of the famous Press Cycling Club of this city and accomplished a feat of diplomacy in organizing the Associated Cycling Clubs of Buffalo, bringing into that organization clubs which for years had been bitter enemies. Mr. Baker's law firm partner is M. F. Dirnberger, widely known in cycling days as Mike Dirnberger, one of the old Rambler racing team.

Harry C. Wilcox, secretary-treasurer of the association, is president of the Centaur Motor Co., of this city, which conducts a large garage and manufactures automobile parts.

Articles of incorporation, which were recorded in Albany yesterday, were filed here today by the National Association of Automobile Dealers. As set forth in those articles the object of the association is "to accomplish, through association, the promotion and advancement of the mutual interests and welfare of its members and to harmonize their relations with each other." The principal office is in Buffalo and the annual meeting will be held on the third Tuesday of January.

BISONS MAKE UP RACE CARD

Buffalo, N. Y., July 24—At a meeting late last week of the Buffalo Automobile Racing Association the list of events which Manager Dai H. Lewis proposed for the automobile race meet at Kenilworth track on August 18 and 19 was approved. Kenilworth track promises to be in better condition for the races this year than last. During the recent meet of the running horses at the track the track surface was an improvement over previous conditions and the racing association plans to do everything possible to improve the surface before the racers gather here. Four or more starters are necessary to make the \$500 trophy event a race, two at least to start in each heat. Any winner of second place whose time is better than that of the slowest heat winner will be eligible to the 10-mile final event on Saturday, the last day of the meet.

OUTING FOR ORPHANS

Cleveland Automobile Club Gives 1000 Poor Children of City the Time of Their Lives

Cleveland, O., July 25—The Cleveland Automobile Club and the Cleveland daily papers combined in giving the poor orphans of the city the time of their lives last Wednesday. Other cities have given similar events, but the Cleveland affair was unquestionably the largest and most successful ever given. More than 1,000 unfortunate little ones were entertained in a manner which they will long remember. It was a difficult proposition to handle the occupants of twelve big institutions, give them a good ride, a fine luncheon and then return them safely, but thanks to the excellent management of Secretary George Collister and Assistant Secretary Charles Marvin, and the help of a number of members, it was carried off without a hitch. It was a big problem to secure cars enough. With nearly 2,000 machines in the city, it was figured that the club ought to secure 500 machines without difficulty, but it was hard work getting one-third that number. The manufacturers responded liberally, some of them furnishing as high as a dozen cars with drivers. So did some of the dealers; others did not. The club members did their full share, but from the general public it was difficult to secure adequate assistance. Some of the wealthiest citizens not only sent their cars but donated in other ways. John D. Rockefeller wrote that he had no car that could be used, but he sent a liberal cash donation which enabled the committee to hire several cars and drivers, including a big bus that carried thirty or more. Still there were not cars enough to carry out the original program of all meeting downtown for a grand parade. Instead it was necessary for some of the cars to make double trips, going first to one institution, giving the youngsters a good ride and then returning for another load. The cars all reported at the club rooms in the Hollenden as early as possible and each was assigned to a certain institution. Each car was properly decorated with flags and each was numbered. To each child was tied a tag, giving the number of the car and the name of the institution. As fast as possible they were loaded and taken directly to the parks and boulevards for a ride. No prescribed routes were laid out and as the institutions were scattered all over the city, it was seldom that there were more than three or

four cars together at one time, but it seemed as if the whole city was filled with flying machines filled with laughing children.

At 11:30 a. m. all were assembled on the green lawn at Gordon park, where, after half an hour of play, the dinner signal was sounded and all sat down under the trees in big groups, where each child was provided with a well-filled lunch box containing sandwiches, fruit, candy, cake and a souvenir. Ice cream and lemonade were passed. Hundreds of grown-ups stood around and watched those youngsters eat and enjoy themselves. After lunch the children were allowed to scatter and amuse themselves, of course under the guardianship of their instructors. They played games, ran races and many of the small boys were allowed to go in bathing. The host of little ones romping on the green lawn made a beautiful picture. Several of the schools had various colored uniforms, some blue, pink, white and orange, so that from a distance the lawn looked like a huge flower bed. At an appointed hour all gathered together on the lawn and listened to a band concert which closed with "America," the children joining in the grand old air.

The gathering of the flocks for the return trip was no small task. The youngsters didn't want to go home, even with the prospects of another long automobile ride in front of them. It took much strenuous work with megaphones to get them in their proper cars. One or two failed to make their appearance in time and were taken home by kindly policemen, who, by the way, were of great assistance in looking after the little ones. Tired and happy the majority of the children were home by 5 p. m.

One fact was made apparent to everyone who witnessed this outing; that is, that children in these institutions seem uniformly to have better training and better bringing up than the great majority of children who have good homes. They are more thoughtful of one another, more polite, and more grateful for favors and discipline is shown in every move.

Said one club man: "I tried to talk children's talk to some little girls of 10 and they responded like educated young ladies. I bought them some peanuts and popcorn and I nearly fell off my seat when a little lass who could not have been over 7 said: 'Thank you, sir, this is quite an unexpected pleasure.'"

The experience of the day's outing will furnish food for thought for many a business man who has seen little of the "shut-in" side of life.



SOME OF THE CLEVELAND ORPHANS IN CADILLAC CARS

UNIQUE CARD MADE UP

Tests Arranged for Meet of Federation of American Motorcyclists Include Novelties

Waltham, Mass., July 24—Many promises of support from Chicago, New York and other important points have been received by the Waltham Autocycle Club, which is promoting the third annual meet of the Federation of American Motorcyclists, beginning August 8, and it is predicted that with all the attractions scheduled by the club that the visitors will long remember the Waltham affair. The contest part of the meet bristles with features, including a hill climb, a road race and a track meet. The hill climb will be 1 mile up Prospect hill on Tuesday, with two classes provided for, No. 1 being open to single cylinder stock machines and the other to all comers. The road race will be run Wednesday morning. It will be a 25-mile handicap, open to all machines, over a 5-mile course via Lexington and Beaver streets and the Trapelo road. In the afternoon there will be the races at Waltham track, with three events scheduled. The first will be a 1/4-mile skill contest, the entrants to ride around obstructions and on a 5-inch plank. Time without failure counts. There will be 1/4-mile dispatch race, the contestants to collect three messages from the three locked boxes around the track, fastest time counting. The third will be a 1-pint economy test, the contestant riding the greatest distance on the pint to be declared the winner. On Saturday there will be the regulation track races, six events, including three championships. Entries close August 5.

Excellent judgment was displayed by the F. A. M. in selecting Waltham for this year's meet, since the region is admirably suited to the purpose. All requisites for the most successful contests of various kinds are at hand, while the facilities for short pleasure tours are unequalled. Moreover, the hard, macadamized roads, extending in every direction and so well shaded by the most beautiful foliage, will be found a constant source of pleasure to the motorist. A few moments' ride from the center of the city brings one to a sign bearing the words "Prospect Hill Park," and upon turning sharply to the right one finds himself on a winding woodland road, ascending sharply by an alternate series of abrupt pitches and easy grades. This is an ideal spot for a hill climbing contest, and the rider instinctively throws wide the throttle in order to enjoy the exhilarating upward rush through the woods. Steep pitches must be ascended, and sharp curves rounded, which add interest to the climb by constantly opening new vistas, until a rock stairway is reached, leading to the summit. After leaving the machine and mounting these steps, one finds himself upon a rocky eminence, with a superb view stretched out before him. The course selected for the 25-mile road race is within easy reach, and is admirably adapted for the purpose, since it will enable the spectators to see the machines pass five times as they complete the circuits about the smooth, hard course. After a spin down Lexington street, the contestants will turn into Beaver street and continue for a short distance, then down Forest street to Trapelo road and back to the starting point. Lexington

street is a fine hard turnpike, nearly level, and bordered by beautiful trees, while from Beaver street one plunges into the cool shade of Forest street, emerging a few moments later on Trapelo road, from which a picturesque rolling country is to be seen. The Waltham bicycle track, which was one of the first things of its kind in the country, will be available for various skill contests and short races. A speed of a mile in 1:30 may be attained upon its banked surface, but for faster time the Charles River park track is unexcelled, as it permits of a speed of over 1 mile in 40 seconds.

The Woodland Park hotel, at which the visitors will stay, is surrounded by trees, under whose cool shade one looks out from a broad veranda over a beautiful lawn. It is only a short distance from Commonwealth avenue, one of the finest boulevards in the country.

FLOATING ACME STOCK

Chicago, July 24—Frank A. Devlin, Arthur A. Devlin and Allen C. Durborow, of Chicago, announce that they have purchased the entire capital stock and good-will of the Acme Motor Car Co., of Reading, Pa., and that they propose to capitalize the property for \$600,000, divided into 6,000 \$100 shares, of which \$200,000 will be guaranteed 7 per cent cumulative preferred stock and \$400,000 common stock. It is intended, the new owners say, that every dollar of the money subscribed for the stock shall go into the purchase of the plant and to provide funds for increasing the business. It is estimated that the assets figure up to \$318,000, as follows: Real estate, \$150,000; machinery and equipment, \$55,000; hand tools, \$5,000; materials and supplies on hand, \$65,000; finished stock on hand, \$18,000; patents, patterns and drawings, \$25,000. The factory today is running and turning out, it is claimed, three four-cylinder cars and five two-cylinder runabouts each week. It is estimated that under the new plans it will be possible to turn out 300 four-cylinder touring cars at \$2,750, 500 two-cylinder runabouts at \$1,000 each and 150 store delivery wagons of a new type at \$2,000 each during the 1906 season.

TO MAKE PHOENIX CARS

Freeport, Ill., July 22—D. C. Stover, once the manufacturer of the Phoenix bicycle, is at the head of a movement to form the Stover Automobile Co., for the purpose of making the Phoenix automobile. A meeting of interested parties was held at the State bank Wednesday night and plans discussed. It is reported that the intention is to form a heavily capitalized company with Mr. Stover at the head. This will be incorporated in a few days, when the officials will be announced. The company is to be composed of men who have been associated with Mr. Stover for some years in various enterprises, but the new organization is entirely different, distinct from any of those now operating under the name of Stover. The old bicycle plant will be used and the company will turn out gasoline touring cars. W. A. Hance will be the superintendent. He is now ready to receive prices on bodies, wheels, axles, etc., which will be used until the company can get its own parts. The exact car designs are not yet completed, but will be rapidly pushed after incorporation.

RECORD FEAT AT OSTEND

Giuppone Smashes Motor Cycle Kilometer Mark—Wagner Wins Fame in Darracq Car

Paris, July 14—French motorists have been giving their attention this last week to the events at Ostend. Those who attended the meet in search of record-breaking sport were not disappointed. Four new marks were set, the most phenomenal of which was the Giuppone record of 27 1/4 seconds for the motor cycle kilometer. Cissac Tuesday, the second day of the meet, set a new world's mark for the kilometer by lowering the 29 1/4 seconds set by Lanfranchi, to 28 1/4 seconds. Thursday Giuppone startled the French motor world by covering the distance in 27 1/4 seconds on his Peugeot.

A mark of 55 1/2 seconds for the mile was made by Giuppone at the same time, which establishes a new world's record. Cissac went the latter distance in 57 1/2 seconds.

Wagner won another triumph for the Darracq on Tuesday by covering 10 kilometers in 4 minutes 8 seconds. The second day of the meet proved a day of wonders, for, in addition to the new motor cycle marks set by Cissac and Wagner, Baron Jochems clipped 1/2 of a second from the 5-kilometer tourist mark of 2 minutes 52 3/4 seconds held by Baron de Caters with a Mercedes. Jochems, in a 60-horsepower Mercedes, went the distance in 2 minutes 52 1/4 seconds.

Rigoly, with a Gobron, did good work on the first day of the meet, going the kilometer in 21 1/4 seconds, the same time he made last year and within 1/2 second of the world's record set by Baras with the Darracq. Evenespoel, in a 7-horsepower Oldsmobile, made the best time in the tourists' class competition both Monday and Thursday. He went a mile in 2 minutes 38 3/4 seconds Thursday, which was better than any other in the class of light runabouts. Baron Jochems, in a 60-horsepower Mercedes, covered a mile in 37 seconds. Jochems' car was in the ninth class, for most expensive and high-powered machines. The intermediate cars all made good time, but no records were broken.

The last days of the week were given over for the most part to exhibitions of tourist driving and several runs. Receptions were tendered the visiting motorists by the committees in charge of the event. Summaries of the races:

Motor cyclettes—Giuppone, Peugeot, first; mile, :55 3-5, an average of 104 kilometers 367 meters per hour; kilometer, :27 1-5, an average of 132 kilometers 352 meters an hour. Cissac, Peugeot, second; mile, :57 1-5; kilometer, :29 1-5.

Motor cycles—Giuppone, Peugeot, first; mile, 1:03; kilometer, :31 4-5. Pilette, de Dion-Bouton, second; mile, 1:40 4-5. Coppin, Red Star, third; mile, 2:11 4-5.

Light cars—De La Touloubre, Darracq, first; mile, :54 3-5; kilometer, :26 2-5. Clivell, Gregoire, second; mile, 1:22. Renonce, Gregoire, third; mile, 1:25.

Heavy cars—Wagner, Darracq, first; mile, :49 4-5; kilometer, :26 2-5. Rigoly, Gobron, second; mile, :52 4-5; kilometer, :23 2-5.

Tourists, first class, 5,000 francs cars—Evenespoel, Oldsmobile, first; mile, 2:38 2-5.

Tourists, third division, 9,000 francs cars—Aertneys, Darracq, first; mile, 1:33 3-5. Fischer, Vivinus, second; mile, 1:38 2-5. Hombach, Vivinus, third; mile, 1:49 2-5.

Tourists, fourth division, 12,000 francs cars—Vanderstegen, Fiat, first; mile, 1:32. Debrey, Darracq, second; mile, 1:41 2-5.

Tourists, fifth division, 15,000 francs cars—Servais, La Buire, first; mile, 1:33 3-5. Fraignac, La Buire, second; mile, 1:39. Christiaens, N. A. G., third; mile, 1:42. Marmier, Radia, fourth; mile, 1:48 3-5.

Tourists, sixth division, 17,000 francs cars—Madoux, Rochet-Schnelder, first; mile, 1:20. Kiret, Rochet-Schnelder, second; mile, 1:24. Jacob, Arles, third; mile, 1:37.

Tourists, seventh division, 20,000 francs cars—Jamar, Germain, first; mile, 1:22 3-5. Gaste, Radia, second; mile, 1:28 1-5. Richez, Brouhot, third; mile, 1:30 1-5.

Tourists, eighth division, 30,000 francs cars—Jochems, Mercedes, first; mile, 1:10 2-5.

CUTS RAILROAD FREIGHT RATE

New York, July 25—Action of much interest to automobilists generally, and to manufacturers in particular, was taken at a meeting of the western classification committee, representing the railroads west of Chicago, which was held in Charlevoix, Mich., last week. It consists of an important reduction in a class of freight rates for automobiles west of Chicago. The news comes from J. S. Marvin, manager of the traffic department of the Association of Licensed Automobile Manufacturers, who went to the meeting representing the licensed makers and who returned to New York on Monday. The reduced rate applies to automobiles "knocked down" and crated or boxed, and shipped in less than carload lots. Under the new rule these will be accepted at the rate for first-class freight, instead of three times the first-class rate. The reduction will go into effect October 1. The new ruling makes it possible for a man, shipping his car from Chicago to points farther west, to do so at about one-third the former cost.

A meeting of the executive committee, the patents holding company committee, the trades and agency committee and the show committee of the Association of Licensed Automobile Manufacturers, will be held at the International hotel, Niagara Falls, on July 27. These several committees will render their reports to the board of managers at a meeting of that organization, to be held at the place named in the call July 28-29.

WANAMAKER OUT OF IT

Department Store Magnate Decides the Automobile Is Not a Good Thing for Him To Handle

Detroit, Mich., July 24—John Wanamaker has given up the New York and Philadelphia agency for the Ford Motor Co., and the company is now making preparations to establish direct agencies in both of these eastern cities in the near future.

"Mr. Wanamaker found that the automobile business was hardly a good branch for his department store," declared Mr. Couzens of the Ford company today. "The trouble is that his customers insisted on making the automobile business into the rest of his business too much. He has probably 25,000 open accounts on his books all the time. A great many of these city customers have been buying thousands of dollars' worth of furs and fine wearing apparel every year. When it came to buying a \$1,000 automobile they expected just the same kind of treatment on it as they were used to getting in the fur or other departments of the business. For instance: A man might take an automobile and after he had used it a month or so decide that it was too small for him or that he wanted some other make. He would expect to return it just as he would anything he had gotten from the Wanamaker stores. A garment may be worn once or twice and returned without loss to the dealer, but when an automobile has been driven for a while and the dealer has to take it back, its value is very much depreciated. In order to please his big customers, however, Mr. Wanamaker has frequently had to take back machines and sell them again at a serious loss to himself. Consequently he decided to go out of the automobile business entirely.

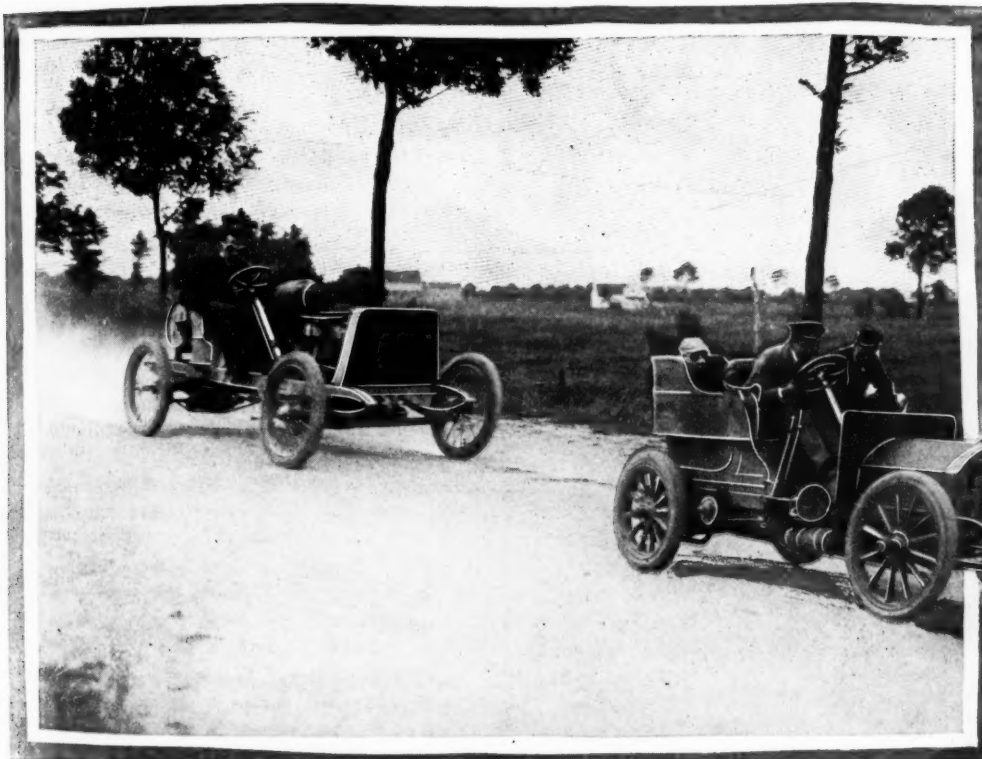
"The connection with Mr. Wanamaker has been very valuable to us, as he has sold a great many of our cars. At the same time

we have realized for a long time that a department store was possibly not the best place to sell automobiles, and as a consequence both parties are satisfied with the change in arrangements. We have taken Mr. Wanamaker's old up-town store on Broadway, between Forty-ninth and Fiftieth streets, for our branch and E. B. Jackson, who handled the automobile department of the New York Wanamaker store, will manage our branch there. Arrangements for a Philadelphia branch have not yet been made, but I expect to go to Philadelphia the end of the week and will then decide what we shall do in the matter."

That the department stores are gradually being convinced that the automobile business is not a suitable one for them to dabble in is believed by many. This action of Wanamaker's in deciding to step down and out of motoring is only following the example of Rothschild & Co., of Chicago, who cut loose some time ago. This giving up the handling of cars, however, is not expected to have any effect upon the department stores continuing the selling of automobile supplies and clothing. That, it is believed, is far more in their line than the retailing of motor cars.

New York, July 25—The outcome of a visit of Henry Ford and James Couzens to this city on Friday and Saturday of last week is the announcement that John Wanamaker will no longer handle the Ford cars here and that the Ford Motor Co. will establish its own branch August 1. This branch will practically be the eastern selling headquarters of the company. It is planned to establish a storehouse and make the New York branch the distributing center for the entire eastern territory. Secretary Couzens says that the parting with John Wanamaker was amiable and satisfactory to both parties and that the establishment of an eastern branch was necessitated by the big and largely increased business in this territory, which required the direct and personal attention of the company and its officers. With the announcement of the Ford branch comes a report, which seems more than mere rumor, that John Wanamaker will retire entirely from the automobile business. The relinquishment of the Ford agency, it was said at A. L. A. M. headquarters, will in no way influence the prosecution of the Selden patent suit against John Wanamaker.

Two years ago John Wanamaker established a big garage in East Fifty-eighth street. This was abandoned last winter and an exclusive motor car branch was opened on Broadway, between Forty-ninth and Fiftieth streets,



WAGNER IN A DARRACQ

VANDERSTEGEN IN A FIAT



RIGOLLY IN A GOBRON-BRILLIE

which will probably be the temporary headquarters of the Ford Motor Co. No announcement has reached here as to the personnel of the new Ford eastern staff.

The Realm of the Commercial

Car

A four wheel drive truck

CLIMBING
A 29.2 PER
CENT GRADE
WITH 8½
TONS OF
STONE AS A

LOAD



The Four-Wheel Drive Wagon Co., of Milwaukee, Wis., has for 10 months been doing daily testing work with its four-wheel drive and four-wheel steering gasoline truck and is now preparing to begin the manufacture of these vehicles. Besides having a four-wheel drive the wheels have wood tires which have stood remarkable tests and have given satisfactory service on slippery pavements, hills and in mud roads.

The truck that has been used for demonstrating purposes and which is illustrated is driven by a four-cylinder 30-horsepower Rutenber motor coupled with a multiple disk clutch to a sliding gear transmission, from which the drive is to each of the four wheels through a separate chain. The new trucks to be built will differ in many regards from this, among which can be noted the use of a 40-horsepower motor, made by a different concern, shaft drive to the center of the front and rear axle, and three speed and reverse transmission gear, as well as the enclosing of the brake drums within the wheels.

Last week a MOTOR AGE representative visited the factory of the company and had a long demonstration with the truck. None of these trucks has as yet been placed on the market, but the demonstration rig has seen active work with many companies in the beer city. A special demonstration commenced with cutting the figure 8 on the block-paved street in front of the factory to demonstrate the adaptability of the four-wheel steering. The truck turned with ease between the curb and the outer car track and maneuvered with equal facility going ahead or reversing.

A test of the truck's power was made by backing the rear wheels to the 8-inch curb and then stopping. With both wheels resting against the curb the power was turned on and the wheels mounted the curb without a slip. The front wheels were taken over in similar manner. To make the power test still more thorough 2 tons of stone, by actual weight, were placed above the rear axle and

the wheels were backed to the curb so that both touched, when the clutch was thrown in. With the engagement of the clutch the wheels climbed the 8-inch precipice without a pause and crushed through the plank sidewalk. This performance was repeated several times with the front and rear wheels, the 2-ton load being left in place.

As a test of the truck on the road it was taken to a stone yard in rear of the factory, where two flat cars were loaded with flag stones. By actual weight 8 tons of stone were piled on the platform of the truck. Before starting it was suggested coupling the truck to the two cars loaded with stone. A rope was secured and the coupling made. The weight of the cars and the stone totalled 40 tons, while the truck weighed 4 tons and carried an 8-ton load, making a total of 52 tons on the motor. The railroad track had



BACKING OVER AN 8-INCH CURB

a .028 per cent grade. The motor was cranked, the clutch thrown in and the truck started off with its own load and the 40 tons, the weight of the flat cars. The load was pulled 10 feet, further pulling not being possible because of the end of the switch.

After this the truck was uncoupled from the cars and it started off on a 3-mile run to where the stone was to be delivered. The roads were dry, in fact dusty, and cedar blocks prevailed for the first mile, after which macadam was reached. Only two grades of any account were encountered, one a 2-per cent rise and the other a 9-per cent grade. The first was taken on high speed at 6 miles an hour and the other on the second speed at about 3 miles an hour. On the other parts of the trip the pace of 6 miles an hour was maintained throughout. For a part of the journey some of the spectators got off to observe the truck from the sidewalk and they found themselves getting behind every rod until finally they had to sprint and get on the load again.

The wood tires behaved as well as rubber ones at this speed. Noise was not observed as a result of their use, and from actual observation no slipping was noticed at any place. The wheels left a good broad mark on the street and crossed street car tracks at any angle without trouble. Two coal wagons were passed shortly after leaving the factory, and later on a couple of stone wagons were overhauled. One of the latter drivers, who was specially interested in the big truck, watched it for several minutes and declared that three big teams would be required to haul its load over the streets and at the pace it was making.

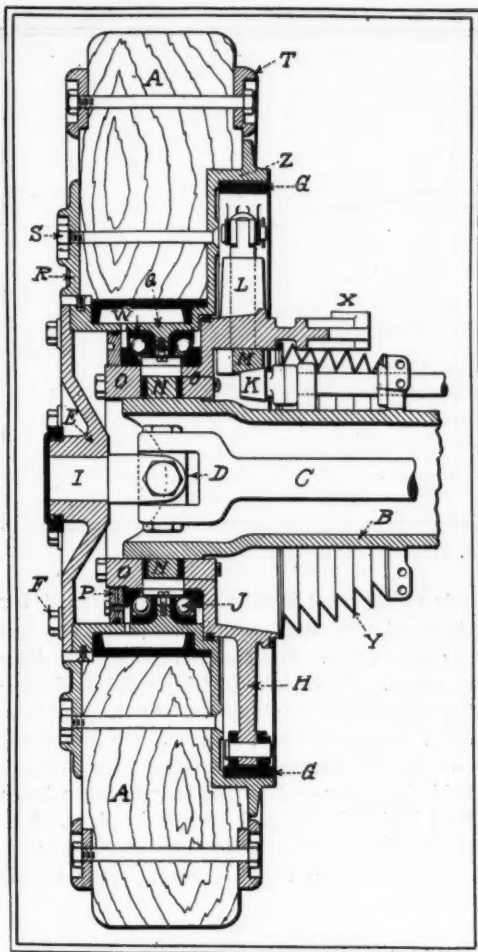
The supreme test of the truck came at the end of the trip. The stone had to be taken on to a terraced lawn, the top of which was several feet above the road level. At this point the road surface was rough and the rise on to the lawn so irregular that no two of the road wheels were on the same plane at once. At the side of the road was a dry,

rough ditch and then the rise over the sidewalk and on to the lawn was rough clay and grass. On the first attempt the front wheels reached the top but the rear wheels, being pocketed in the clay, the engine was killed. The truck was backed down and a fresh start made, when the front wheels marched up to the top and on to the sidewalk. When in this position the rear wheels became pocketed and a little shovelling was necessary. At the steepest part the frame of the truck showed an incline of $29\frac{1}{4}$ per cent, but in places the ascent of the individual wheels was much steeper than this.

One feature was especially noticeable, that for heavy trucks carrying loads ranging from 4 to 8 tons or upwards a speed of 6 miles an hour is sufficient when traveling under load, but without load faster speeds should be installed. Six miles is fast enough for hauling, as faster than that would result in a violent shaking of the load and ruin to the street in wet weather. To be a paying investment when traveling at this speed a truck must be capable of carrying at least 8 or 9 tons, a load equal to that drawn by three big two-horse teams. In this way the truck can afford to travel at a 6-mile rate without the necessity of passing other heavy wagons on the street. For down-town service in big cities this large carrying capacity is a prime requisite, as also is the 4 to 6-mile-an-hour pace.

The trucks have channel steel frames with round corners and channels turned to the inside. The frame is carried on a set of platform springs behind and semi-elliptics in front, both working in sliding blocks on the frame and clipped to the axle in the usual way. Both axles are alike, being of the divided type and carrying a differential in the center, with separate drive shafts through the casing to each wheel. The casing carries the load, freeing the drive shafts from all strain except that of driving. The lower half of the casing is a single casting. The construction of the axles can be followed from the sectional illustration. The drive shafts meet in the center of the spur gear differential, where they respectively carry the spur gears. Each shaft, however, is divided before reaching the center. Outside of the bearing boxes appears a flange, or rather two flanges, on adjacent ends of the shaft. These flanges are bolted together, but not tightly, leaving a fraction of an inch between them and a similar space surrounding the belts; the object of this being that a little freedom must be given the shaft for the universal joint in the hub. Another feature in the axle is that the large bevel gear surrounding the differential is on a sleeve that extends to right and left along the axle to the outer ends of the roller bearing boxes. The bevel gear on the ends of the drive shaft is backed up by a bevel-shaped plain wheel that bears against the rear face of the bevel on the differential and protects it from thrusts when starting.

The road wheel and method of driving form one of the novel features of the car. The wheel is not of the artillery or disk type, but of solid wood with wood tires, the same blocks forming the body of the wheel and the tire, extending from the hub to the circumference. Three parts comprise the wheel: The wheel proper A, which is 36 inches in diameter, has tread 8 inches wide; the station-



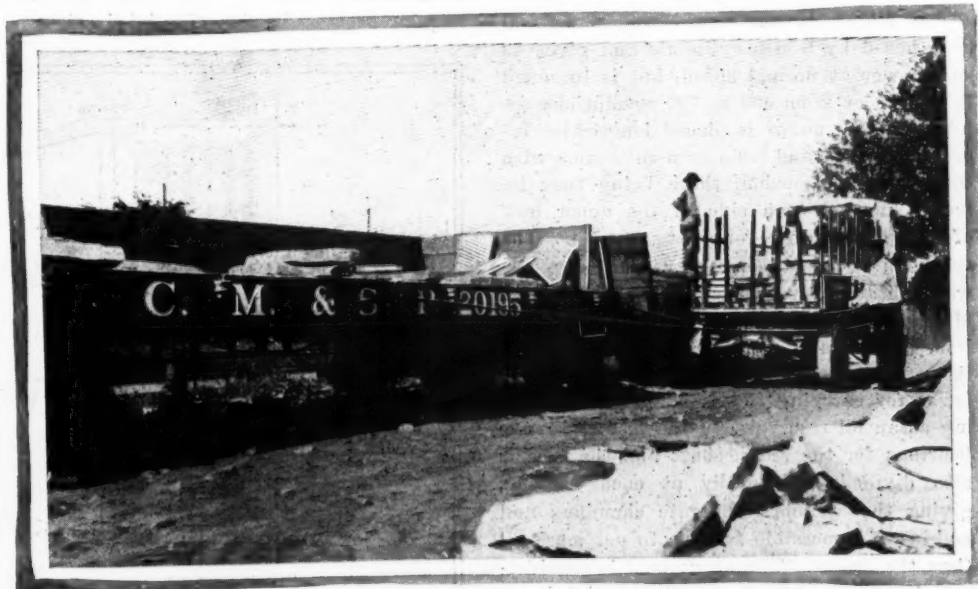
THE WHEEL AND ITS CONSTRUCTION

ary axle housing B, which carries within the wheel part A the oscillating ring O, pivoted to the housing through the trunnions N—this oscillating ring is connected with the steering gear through the arm X and it is by means of this that the wheel is turned out or in when steering—and the driving part of the wheel, consisting of a drive shaft C within the axle casing, a universal joint D on the drive shaft, and a short continuation I of the shaft, having a square fit in the hub cap E, which is fitted to the part A of the wheel, the drive being from the drive shaft through the universal joint and then transferred to the wheel through the hub cap. The wheel proper A is made of rock elm blocks reaching from the circumference to the hub, equal in width to that of the wheel,

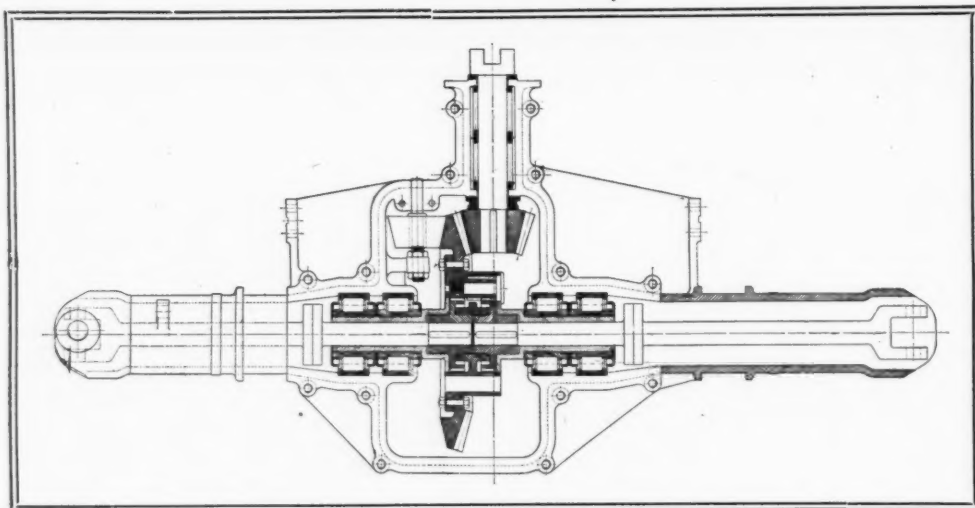
which is 8 inches. Each block is 3 inches thick and the blocks are separated by metal wedges 6 inches deep and reaching from side to side of the tire part. These blocks are used to protect the wood blocks when running in car tracks or other places where the ends of the blocks would be chipped. To hold the blocks in place the metal hub Q is made in irregular shape, having the bearing part Q straight and the part Z formed to comprise the brake drum. The part Z also serves to retain the blocks at one side, this duty on the other side being done by the hub flange R held in place by bolts S and the additional ring T near the periphery also bolted in place. When the blocks are worn out individual blocks are not replaced, but the entire wheel, being returned to the factory, new blocks are installed at small expense. It has been found by months of experimenting that the blocks wear gradually, necessitating a general repair only occasionally. Two sets of blocks, according to 6 months' testing, will do for each year.

The oscillating ring O, by which the steering is accomplished, is interesting. It is a metal ring equal in width to that of the wheel and carries the ninety-six $\frac{3}{4}$ -inch balls that form the bearing for each wheel. The ring remains stationary on the axle casing, being pivoted thereon, but is capable of being turned in and out through the arm from the steering gear and with it turning the wheel in and out. The part A of the wheel is retained in place by the lock nuts P attached to the oscillating ring and the removal of these nuts will permit of the wheel being removed and the bearing J and bearing cups examined. The oscillating ring, which is in reality the hub of the wheel, as it is the bearing part, is strongly made so as to carry the weight and also do the turning.

The third part of the wheel is the driving feature. Within the axle casing is the live drive shaft C, made of $1\frac{1}{8}$ -inch steel and fitted at the inner end into the differential bevel. Within the hub it carries the universal joint D for transferring the drive to the cap E when the wheel is turned out or in taking a corner, the joint only being necessary when not traveling in a straight course. The cap E is bolted to the part A of the wheel by eight heavy bolts F, which being midway of the center and periphery of the wheel are of ample strength for the heaviest



HAULING FLAT CAR LOADED WITH STONE, 52 TONS IN ALL



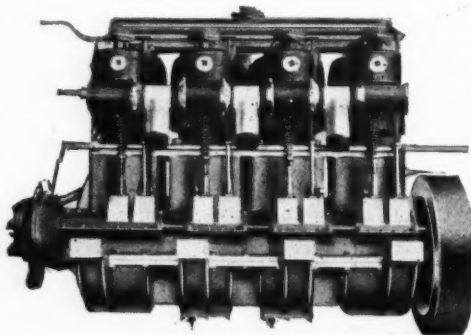
AXLE CONSTRUCTION, SHOWING SLEEVES, HANGERS AND UNIVERSAL JOINTS

driving. The universal joint consists of two forks connected by a 2-inch cube. The fork on the end of the shaft from the differential as well as that on the short part I, going to the hub cap, is made with heavy flat arms for clamping the central cube. One bolt passes through the cube and has its ends riveted outside of the arms, but the other fork is held by short bolts screwed into the cube. Arrangements are made for permanently lubricating the joint. Should anything happen to the joint or the drive shaft it can be removed by taking off the cap E and then drawing out the joint and shaft, which can be done with the aid of a short bar for withdrawing the shaft. When doing this the wheel has not to be raised from the ground.

The brake enclosed in the wheel is of the internal expanding type with a drum 24 inches in diameter and 2 inches wide. The expansion bands are expanded through the cam roller K carried on the axle casing. The cam roller bears against a horizontally placed quadrant M traveling in a horizontal plane on top of the roller. Through the quadrant the plunger L is raised and the rings expanded. The object of the manufacturer in placing the brake within the wheel instead of on the axles is that the universal joint in the wheel will be freed from the braking strain. To render the axle dust-proof around the brake drum a leather bellows Y is introduced which excludes dust and dirt from the cam roller.

The motor of the four-cylinder vertical type has 6 by 6-inch cylinders and gives 40 horsepower at normal speed, but is intended to be run at from 400 to 700 revolutions per minute. The motor is placed lengthwise beneath a bonnet and rests on a sub-frame with three-point suspension, there being four integral lugs on each side of the upper half of the crank case for that purpose. The cylinders are cast separately and have the walls, head, valve ports and water jackets integral. The crank case, made of malleable iron, is in two parts, the upper for carrying the cylinders and the cam shaft and the lower for carrying the crank shaft and acting as an oil reservoir. In the latter are five bearings for the crank shaft and the case is also divided horizontally at each bearing, giving the cylinders separate chambers and making it impossible for one to get more oil than the others. The upper half is considerable larger than usual, there being high bases to which each cylinder is bolted. On one

side of the case is a square compartment for the steel cam shaft, which carries eight cams for the valves. The shaft runs in extra long bearings. The crank shaft is a solid steel forging with hollow crank pins. The throws of the shaft are set at 180 degrees. On the front end of the shaft is a driving gear for the half time gear and on the rear end the large fly wheel is keyed and pressed in place. The pistons have three compression rings, five oil grooves and are 7 inches long, 1 inch longer

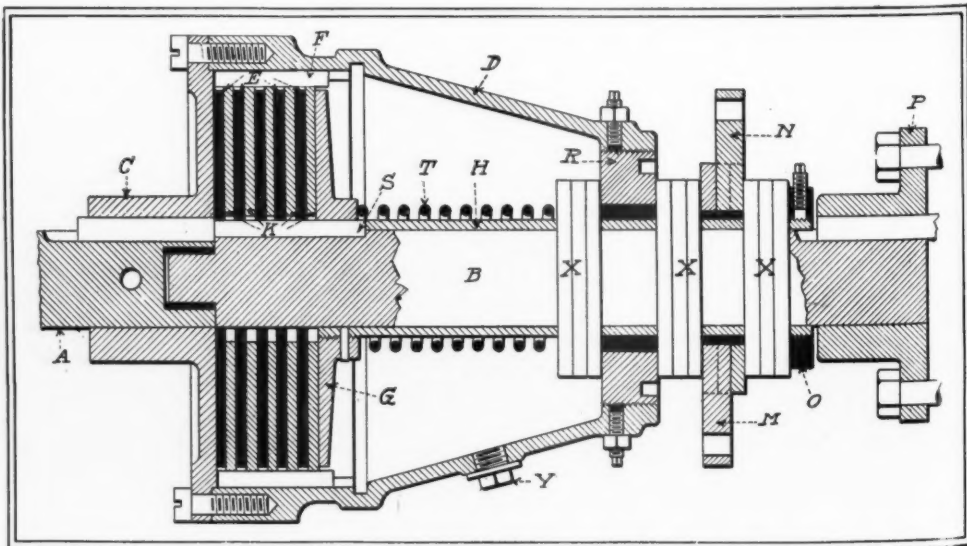


FOUR CYLINDER 6 BY 6-INCH MOTOR.

than the stroke. They are ground to .005 less than the cylinder bore. The piston rings are $\frac{3}{8}$ -inch wide and ground under compression. The piston pins are $1\frac{1}{8}$ inches in diameter, are made from hardened tool steel and ground hollow at the ends. The connecting rods are cast steel in H section, are split at both ends and have bronze bearings with angular grooves in them for lubrication.

The valves are in ports at the left; the inlets being above and worked by overhead rocking arms and the exhausts beneath them. Both sets are operated from the same cam shaft. Other features of the motor are forced feed lubrication, carburetor carried on the right of the crank case adjacent to the inlet valves, rotatory water pump on the front of the motor and gear driven from the crank case and jump spark ignition with the commutator on the front end of the half time shaft and spark plugs in the cylinder ports.

The clutch is of the multiple disk type and runs in oil. The contacting surfaces are ten metal disks 14 inches in diameter and $\frac{7}{16}$ -inch thick, held together by a 150-pound coil spring surrounding the transmission shaft. The shaft A leads from the motor and ends before the disks are reached, but axially in line with it is the transmission shaft B, on the rear end of which is the flange P for connecting with the master gear in the transmission case. The housing C is keyed to the shaft A and carries at its periphery the additional housing D which encloses the disks, and spring and forms an oil reservoir for the clutch. At the rear it is fastened with the disk R, loose on the shaft B. Within this casing or housing are the five cast iron disks E, solid with the housing C and D through the feather F, on which they are free to slide to the right or left. Alternated between these disks are the five steel disks K feathered to the transmission shaft B by the feather S. The end disk G is feathered on the sleeve H on the shaft B, which sleeve extends to the rear of the disk R and the expanding cams M and N, to where it carries the collar O. Against the disk G bears one end of the clutch spring T, the other end bearing against one of the end thrust bearings X. When the motor is started and the clutch not engaged the shaft A, the housing C and D and the disks E are revolving, the disks K not being in contact with those E remaining stationary, as does the shaft B. As soon as the spring T is released, as shown in the illustration, the disk G is forced forward, or to the left in the illustration, forcing the disks together so that those on the shaft B commence revolving, carrying around with them the shaft B and so driving the transmission. To release the disks and disengage the clutch a pedal in the footboard is connected with the expanding cams M and N, which separate, forcing the collar O to



DETAILS OF THE FOUR-WHEEL DRIVE MULTIPLE DISK CLUTCH

the right, which pulls with it the disk G, consequently compressing the spring T and allowing the two sets of disks to separate. The clutch running in oil is very easy in engaging. Before the two sets of disks will revolve in unison the oil between them must be forced out; this gives a period of easy engagement for picking up speed and once the oil is forced out between them and the disks are all in close contact the drive is positive without any slipping. In disengaging the disks readily separate.

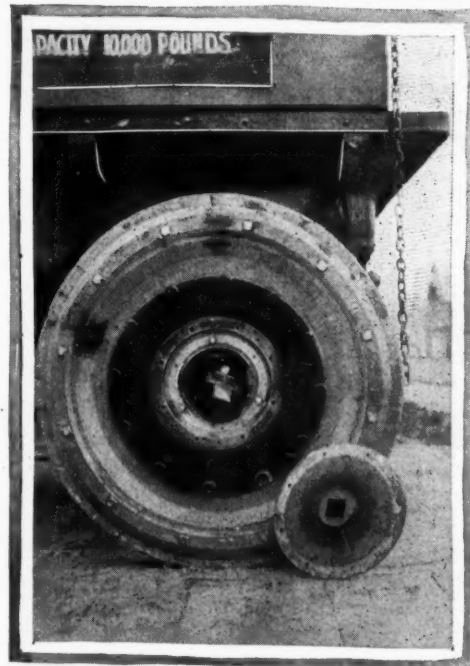
The transmission of power from the clutch to the four road wheels is unique with this company. Between the clutch and the sliding gear case is a universal joint. The gear box is carried on the sub frame by its three-point suspension, and has the main and counter shaft in the same horizontal plane. The former shaft is square and carries a nest of two sliding gears. High speed is by direct drive on the main shaft, the master gear on the clutch shaft and the forward gear on the main shaft in the case having dental teeth on their adjacent sides. The speed changes are obtained by the use of one lever. Plain bearings are used for both shafts and oil for bath lubrication is carried in the case. From the transmission case the drive is through a short double-joined propeller shaft, which carries a spur gear on its rear end. This shaft extends to practically midway of the front and rear road wheels, where the spur gear it carries is superimposed, or rests, upon the spur gear in a spur gear differential. From the differential one propeller shaft runs to the differential on the center of the front axle and another to the differential on the rear axle, there being three differentials on the car, a condition made necessary by the four wheels being drivers. Between the ends of the shafts running to the axles is a large globe joint, coupling the shafts. Each shaft has a sliding fit in the end pieces of the joint, so that when loaded the shafts work in practically the same axial plane, but when unloaded the shafts are to each other as the opposing slopes of a house roof.

In a recent demonstration for the Miller Brewing Co. the truck did the work of four two-horse teams at a daily fuel expense of \$2.15 for gasoline and 25 cents for lubricating oil. The load carried was fifty-four halves of beer, each weighing 190 pounds, a total weight of $5\frac{1}{4}$ tons. The most of the trip was made over improved roads, but in places grades of 7 and 8 per cent were met. The Miller company has figured a net saving of \$10 per day for each truck used.

The factory is pushing the completion of the new trucks, several now being nearly completed. Several Milwaukee concerns which have had demonstrations, have placed orders with the company and a few voluntary orders have been received from outside places. It is the intention of the company to place demonstrating wagons in most of the leading cities in the country.

COMMERCIAL SPARKS

The Pabst Brewing Co., of Milwaukee, Wis., deposes and says that for many years its stockholders, officers and promoters have been sturdy exponents of the virtues of the horse; that this company has been engaged in the manufacture and sale of beer from a period prior to the time Milwaukee began getting famous; that said deponent has taken great



DRIVE CAP AND UNIVERSAL JOINT

pride in its stables with the result that they have become widely known as among the best in the world, and that the horses of said stables have frequently carried away the ribbons right from under the noses of dozens of competitors; that said deponent realizes and hereby does admit that motor power is rapidly supplanting horse power in all branches of its various and divers uses; that this company is seriously considering replacing its stables with a large automobile garage, well stocked with motor trucks; that the said matter is still under consideration; further—for a while at least—this deponent saith not. In an interview given out last week Gustav Pabst, who is one of the heads of the Pabst Brewing Co., admitted that the project of replacing the company's vast stables with motor trucks is being considered and that chances were that the company would be compelled to take that step. Inasmuch as the Pabst people have been among the greatest horse enthusiasts of the country such a step would be one of great significance. The Pabst brothers have been prominent as horse show promoters and have heretofore had little use for automobiles either for business or pleasure.

W. L. Gibson, official surveyor of Perth county, Scotland, uses steam tractors for

hauling metal and other materials used in his work. The success of them is evidenced by the following figures: A load of $4\frac{1}{2}$ tons is hauled over ordinary roads and $3\frac{1}{2}$ to 4 tons over hilly roads with a saving of 36 per cent over horse haulage. The work with steam tractors for 42 days amounted to 664 tons of material being hauled to where it was needed. The cost of this transportation amounted to \$180.12 and the cost of transporting it by horse would have amounted to \$270.40.

The German postal authorities are firm believers in motor vans in mail collection and delivery work. In Cologne nine vans have been in constant use for months. Each covers 32 miles daily doing the distance at 9 miles per hour. In Berlin eight wagons have been used for over 1 year and in the same city an electric parcel post in connection with the postal department has been giving excellent success.

The Western Land Securities Co., a vigorous concern of St. Paul, Minn., is up-to-date in that it uses an automobile bus for showing prospective buyers its numerous lands in different parts. Regular runs are made between Stillwater and Dickson, N. D., a distance of 52 miles, over ordinary roads.

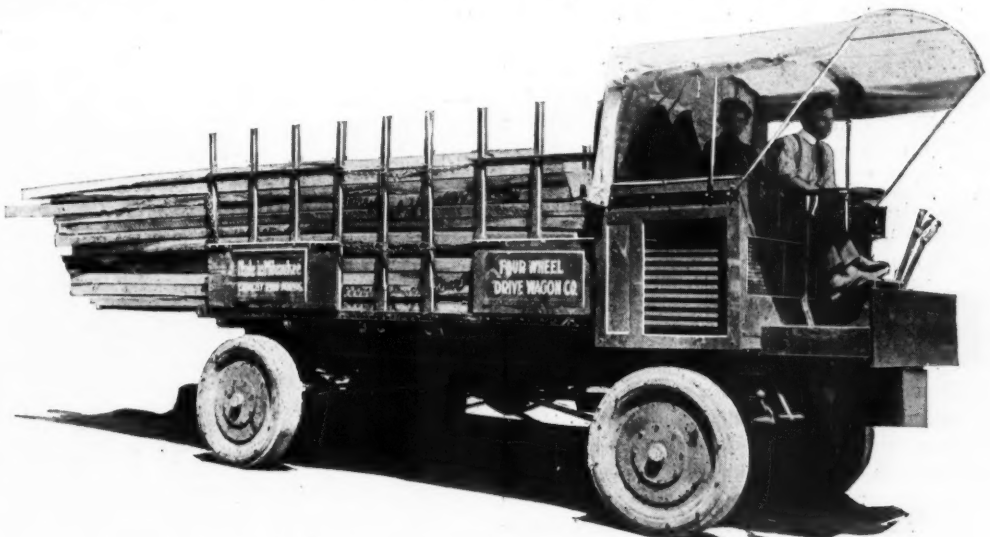
A county council in Scotland has hired a motor wagon for general carting purposes. The cost of carting by horse is 22 cents per mile for a horse and cart, whereas the manufacturers of commercial wagons guarantee to do the work for 7 cents per mile for the same distance.

Having used one 14-horsepower Packard truck since March 1 in delivery and draying work in connection with its factory in Buffalo, the Larkin Co. has ordered two more trucks of the same size and carrying capacity from the Packard Motor Car Co., of Detroit, Mich.

The Direction-Generale des Postes at Berne, Switzerland, has asked for tenders for carrying the mails in Switzerland in commercial wagons. Preference is given to gasoline machines, although steam and electric vehicles are not barred.

The Compagnie des Automobiles de Place, of Paris, France, will soon have 250 motor cabs running for hire in that city. The vehicles were all made by Renault Brothers.

The Great Eastern Railway Co., of England, is about to start a line of motor buses between Colchester and Mersea, 12 miles, there being no railroad between the points.



FOUR-WHEEL DRIVE WAGON WITH A HEAVY LOAD OF LUMBER

LITTLE STORIES MOTOR LIFE

It was at one of the stops on the St. Paul tour that several of the tired enthusiasts gathered in the smoking room of the hotel. The travel stains had been removed and for a few hours the muddy roads of Illinois had been forgotten in the general peace that prevailed. It was just the time when a man feels like fanning and over the cigars the story tellers started their session.

The day's experiences had been duly threshed out and the man who had been forced to call on a farmer for the use of his horses to pull his car out of the ditch had finished his hard luck tale, when the conversation switched to the experiences of other ill-fated tourists.

"It surprised me to be able to get gasoline so easy along this trail," commented one of the smokers. "It reminds me of the story of the man whose brother gave him his second-hand car when he bought a new one. Naturally, the new owner of the old automobile was crazy to try his present and he at once went for a little jaunt. The car went like a charm until he got ready to turn around and start back. Then he found his supply of gasoline had run out. He purchased some at the corner grocery and tried a fresh start. Still the car refused to budge. Then the brother who gave the car away was sent for and the two proceeded to look for the trouble. The two worked all day, taking the machinery to pieces. With the parts strewn around them they were fairly stumped. Then it occurred to the donor to investigate the gasoline supply only to find that the storekeeper had sold his brother kerosene instead of gasoline."

"At that he could have used the kerosene if his engine had been hot enough," commented the man who was first in that day. "I had an experience something like that myself. I was touring up through Wisconsin and running out of lubricating oil, stopped at a store for a fresh supply. I laid in a big can full and I must say the oil worked like a charm. In fact, I was so pleased with it that on my way back I stopped at the same place for more. There was a new clerk in the store and he looked puzzled when I asked him for oil like I had bought before."

"There must be some mistake," he said.

"Can't be," says I. "Here's your label."

"He looked and then shouted, 'That isn't oil, it's a varnish.'"

"Can't help it," I retorted. "Varnish or lubricating oil, it certainly answers my purpose, so give me another can." And for the rest of that tour I drove my car by the aid of the varnish."

"Beginners have some novel experiences," said the garage man as he finished up a job on a car that had been nearly wrecked because driven by an inexperienced owner. "The other day a car was stalled in front of the shop here. The owner had stopped to make a call, but the car refused to start. He appealed to me for help. I went out and looked. The gasoline tank was full and the machinery seemed to be in good order. Then I thought of the

spark plug. It was missing. I told the owner. He looked foolish, dug into his vest pocket and produced the missing plug."

"There was another who had just bought a new car. His first ride was out into the country, the car being packed with several admiring neighbors. Way out near Lonesomehurst the car balked and refused to go ahead. The owner tried all sorts of tricks, but still made no progress. Finally he threw on the reverse gear and the car moved backward like clockwork. Then Mr. Man hired a horse and buggy and put his friends in, sending them home this way. He was too proud to ask for a tow himself and started to back home. Of course he smashed into two or three telegraph poles, but that was to be expected, but otherwise he made good progress. Elated, he determined to make a grand stand finish. He swung around the turn of the road leading to his barn, then attempted to stop in style. Instead of getting hold of his brake lever he put on the high speed, which unexpectedly worked. The machine went full tilt into the side of the house, turned turtle and otherwise disgraced the driver. Now he is taking a full course of instructions."

"I heard of one more crime laid at the door of the motorist," said a traveling man. "I just came from a trip through Pennsylvania and at New Bethlehem found the townspeople aroused over the actions of a driver, whom they charged with cruelty to their chickens. They said that someone in a big red touring car amused himself by throwing into the streets thin pieces of wood about 2 inches long, tied at the center with a string 6 inches in length. At the end of the string was a piece of corn. The greedy chickens swallowed the corn and the string and were then gagged by the stick. Complaint was made to the police, it being asserted that some of the townspeople had been kept busy cutting gags loose from the chickens."

"How little it takes to swing a man's mind from one car to another," mused the salesman as he salaamed three men out of the store. "Now, there goes a case of it. They are three brothers. Two of them are priests and the other is a doctor, who chipped in and decided to buy a car on the co-operative plan."



One of them was an ardent admirer of my car, another fancied one handled by a rival dealer, while the third was on the fence. Finally he cast his deciding vote in favor of my rival and the three went out on a demonstrating trip in the other car. It seemed a cinch that they would buy it. Rolling down the boulevard, the car went smooth as silk and the demonstrator, to make his case good, decided to put it through a convincing stunt, so he drove full tilt into one of the big piles of dirt where they had been digging a sewer. Here the thing balked and refused to obey the reverse gear, sticking deep in the mud. Finally an appeal was made to a teamster who had a pair of mules.

"Give you 50 cents if you pull us out," said the demonstrator.

"You're on," responded the mule driver, as he hooked on to the back of the car and gehawed his mules until the car was once more on the safe asphalt. Even then the sale was as good as made until the demonstrator, without even digging into his own jeans, asked one of the priests if he had half a dollar. He took it and paid the teamster. Getting back to the store, the demonstrator never offered to make good on the 50-cent proposition, which so stirred the prospective purchasers that they left in a huff, came over here and bought a touring car inside 5 minutes. That 50 cents cost my rival a pretty penny, didn't it?"

A dozen motorists seated in the club rooms of the Cleveland Automobile Club a few days ago were joking a fellow member about his greatly changed appearance. Formerly he wore a Van Dyke of the Prince Henry pattern and mustachios of the Pat Hussey type. That day he appeared clean shaven except for a closely clipped mustache.

"Whiskers too hot?" "What are you disguised for?" etc., were the jibes that plainly embarrassed him.

"I'll tell you if you will promise not to give me away," he said after some deliberation. "You know the marshal of Glenville is hot after any one who goes fast enough to splash mud on a machine. I was going through there the other day in somewhat of a hurry when I passed the old fellow waving his club at me and ordering me to stop. I had been hauled up once before and had contributed to the support of the bloomin' hamlet, so I kept right on, but when I looked back and saw him taking down my Cleveland number I knew I was in for it again. Then I thought of a scheme. I hated terribly to do it, for it isn't every one who can raise whiskers like mine, but it was whiskers off or pay \$25 and costs for a second offense, so I stopped at the first barber shop and parted with them. Then I telephoned home to my man, advising him of the change in my appearance, also that I had sold my yellow machine some time before and was using a red one. Sure enough the old man called up in a short time, but he was not satisfied with my man's statements."

"Are you sure he hasn't a heavy beard and mustache?" was his urgent inquiry—"didn't he drive a yellow car and isn't his number so and so?"

"That is his number all right, but he drives a red car and don't wear a beard," repeated my boy.

"Well, I'm from Missouri; you tell your boss he will have to come out and see me or I will be after him with a warrant."

"I called him up and tried to argue the matter, but it wouldn't go, so out I went and you can bet I used my other machine, a red one, but I put the old number on it because I knew the book showed I had that number all right."

"He looked me over, looked at the machine and then at the number. 'No, you're not the fellow and that's not the machine, but, by Jacks, I'm sartin' that was the number.'"

"I assured him that I had been out of town all day and that the car had been in the garage—both of which were the truth—and I left him wiping off his spectacles and muttering to himself, 'Dum eyes must be gettin' wuss.'"

That an automobile is sufficient to bring forth a challenge to fight a duel to the death makes one sit up and rub his eyes and look closely at the motor car to see if perchance four spirited horses are not hitched to it and we are once more back to the coach-and-four days of our ancestors. Yet Arthur Gardiner, who piloted the Rambler car in the recent St. Paul tour, a man who has braved death on many a cycle track, was invited to face a fiery Frenchman the other day and exchange compliments via the pistol route.

"I was tinkering away at a water-cooled car up at the factory the other day," says Gardiner, "and had things working pretty nicely. I needed a bucket of water and naturally turned to one of my helpers, a little



Frenchman, and asked him to get me a pail full of the fluid.

"'Me carry ze water for you after M. Thery wins ze Gordain Bennett; no, nit, not for me,' was the reply I got."

"'It's you to the water wagon or out you go,' says I, thinking Frenchy was simply joshing. But he wasn't, for he comes sailing up to me, jabbering away worse than those French pacemakers used to in the bicycle days. He pranced around me, talking with his hands, shoulders and tongue, with his breast stuck out like a pouter pigeon's. Once he nearly stepped on my toes and naturally I stuck out my hand and shoved him away. That was the final straw, for he came at me shrieking French and fairly teasing me to give him another shove. But I had only taken the whole thing in a good-natured way. Frenchy, however, was in earnest and finding he couldn't coax me to shove him again, he outs with his challenge to fight me a duel with pistols at 50 paces to satisfy his wounded feelings. By this time quite a number of workmen had gathered around us and everyone was joshing Frenchy. He took himself seriously, however, and tried his best to talk me into a duel. But I had my reputation

as a pilot to consider, so I was forced to turn Frenchy down and at the same time give him the key to the street and a revised edition of the code of honor for him to study."

"Alex Winton is a good fellow and deserves all his success," said one who worked with the Cleveland manufacturer in the early days when he was experimenting, "but he must often laugh at some of his trials and tribulations. He had many of them then, but probably the one he laughed over most was when he was building his first experimental car. Carefully he worked out his plans and specifications and when everything was in readiness he ordered the body from a large buggy manufacturing concern. In due time the order was filled. The body came crated in a huge box, which was dumped into the shop. Mr. Winton was ready for it and at once put two able-bodied men to work uncrating the thing. As it came out of the crate, the body looked fine and Mr. Winton rubbed his hands, 'Hold on,' said one of the workmen, 'here's something else,' and he pulled out of the crate one pair of shafts to go on the automobile body. For a minute Mr. Winton was flabbergasted, but he took the matter as a good joke, however, taking the precaution to enjoin his workmen not to say anything on the outside. It was only the other day that I heard the story and I have been pretty close to the Winton people for a long time."

GOSSIP OF CLUBS AND CLUB MEN

Wipe Homer From Map—Sheriff W. H. Turner, of Syracuse, N. Y., the guardian of the peace in Onondago county, has told the Syracuse Automobile Club members that he will arrest automobilists who speed their machines on the new state road leading south through Homer, in the Onondago valley.

Election in Pittsburg—The Motor Cycle Club of Pittsburg has elected the following officers for this year: President, R. Frick; secretary, J. Depp; executive board, A. Schmidt, chairman; J. Watson, E. Eisenberg, H. Bartell and W. Porter. The secretary's address is 1318 Adams street, Allegheny, Pa. A big meet was held July 20 at which twenty-five prizes were given.

Syracusans Use Pennant—Members of the Syracuse Club are readily recognized by the tasty red pennant on which are the letters: "A. C. S." The pennant is in red and blue, the club colors. It may be attached to any part of the car. Twenty-five members of the club went on a run to Selkirk Sunday and enjoyed a dinner at the hotel, returning the same day. Selkirk is on Lake Ontario and is 42 miles from Syracuse. A number of runs will be held in August, September and October.

Kansas City in Line—It is expected that the Automobile Club of Kansas City, Mo., will in the future use the clubhouse and grounds of the Kansas City Driving club. The fight made by the motorists against the city as regards the licenses was successful and a new ordinance will be drafted. Officials for the automobile club have been elected as follows: President, H. N. Strait; first vice president, Dr. G. L. Henderson; second vice president, C. V. Purcell, secretary-treasurer, H. G. Blakeley; directors, F. E. Bernheimer, C. F. Ettwein, R. E. Nace, D. F. Piaz-

zek, H. T. Fowler, Dr. E. M. Hetherington, H. W. Jacques, F. C. Merrill, Fred Heim; captain, D. E. Gudgel; lieutenant, F. R. Sanborn.

Buffalo Visits Detroit—About a dozen members of the Automobile Club of Buffalo left that city last Saturday evening on the steamer Western States for a trip to Detroit, where they were guests of the Detroit Automobile Club on Sunday.

Plan Chain of Clubs—Chances of there being more than one automobile club in Chicago are now declared to be excellent by those interested in the formation of an opposing organization to the Chicago Automobile Club. Dr. Harold E. Thomas, prominent in the racing world and whose car, a Locomobile, was driven in the Bennett cup race by Joe Tracy, is among those backing the rival body. Dr. Thomas has resigned from the Chicago Automobile Club and is out with a broad policy to establish a chain of clubhouses in the different sections of the city. It was first proposed to have the south side home on the Midway, but Wednesday it was announced that the home of the Washington Park Club, where horse racing has been held up to this summer, was not beyond the range of possibilities, it being said that the deal had progressed so far as to the naming of the price. A down town location is figured on, a deal hanging fire with the New Illinois Athletic Club to establish

a garage in connection with the club, which could be used by the motorists, who would also be allowed the run of a portion of the new clubhouse. West side and north side sites are also being looked for.

Canadians Oppose Scorching—Members of the Winnipeg, Manitoba, Automobile Club have decided to help the police suppress scorching in the Canadian city, and a special committee has been appointed to lend a helping hand. There are 150 cars owned in Winnipeg and only twenty-two members in the club.

Warning from Canadians—The Hamilton Automobile Club of Hamilton, Ont., has warned the Automobile Club of Buffalo that new speed regulations have been put into force on the road between Hamilton and Niagara Falls and warning the Buffalo men that when they tour in Canada they would better be careful of their speed.

Posts Road Signs—The Automobile Club of Buffalo has ordered fifty metal signs, enameled on iron, to be placed at road crossings between Buffalo and Fredonia. It is expected that fifty more will be ordered soon for the road between Buffalo and Batavia. The signs are large, the lettering in blue on white giving the distance to Buffalo and to Fredonia with an arrow pointing the right direction.

Rochester Club Growing—One year ago the Rochester Automobile Club of Rochester, N. Y., had thirty-three members; at the annual meeting of the club recently it was reported that the club now has a membership of 159, with a comfortable balance in the treasury. Officers elected were: President, H. S. Woodworth; vice president and attorney, John A. Barhite; treasurer, C. F. Garfield; secretary, Frederick H. Clum.





WAITING FOR THE LAGGARDS TO CATCH UP.

Fear Broken Glass—Mounted police are wanted at Des Moines, Ia., to protect the automobile tires. It is claimed that drunken brawlers smash beer bottles on Grand avenue, the swell street of the town, and that the ground glass ruins many tires.

Ride for Toledo Orphans—The orphans of the Children's Home, at Toledo, O., had the time of their lives at the annual outing picnic in which automobiles transported the waifs from the home to a country point, about 10 miles away, and back again. The tots, nearly 100 of them, were all packed into eleven cars, which had been secured from the factories and garages in the city.

Toured Through Canada—W. J. Murphy and N. M. Varney, of Detroit, with parties in touring cars, arrived in Buffalo last Monday after a tour from Detroit through Canada to Toronto and the Mountain Trout Club. W. P. Holliday, who was with the party at the start, returned to Detroit through Ontario, while the others went to Buffalo to take the boat for home.

Coast Mark Beaten—That coveted record from Los Angeles to San Francisco has been broken again. L. L. Whitman had hardly regained his mark before L. A. Nares, driving a 30-horsepower Pope-Toledo, lowered it to 24 hours 54 minutes. Nares, with Burr Frayer, R. W. Fowler and Tony Nichols in the car, left Los Angeles July 15. He made Santa Barbara in 4 hours 57 minutes, after wasting 20 minutes repairing a tire. A broken spring delayed them 2 hours 28 minutes in Santa Barbara.

Tale of a Dog's Tail—Orel E. Davies, a motorist of Rockland, Me., has a dog story to tell. Speeding along the road the other day he encountered a canine who refused to yield the road to the big car. Something had to happen and it did. His doglets sturdily refused to budge and the car dashed over him. The bark end of the dog came through without injury, but unfortunately the victim was possessed of a long, curly tail which didn't know enough to keep out of danger. The chain nipped a few hairs and the first thing Mr. Dog knew the sprocket wheel was putting crimps in the caudal appendage. Stopping the car released the animal, which refused to be comforted, running away. The motorist then resumed his journey, but a

block or so away he encountered a friend, a veterinary surgeon, who went back to the scene of the accident, found the injured dog and carefully amputated the crumpled tail.

Winton Boat Goes East—The Winton motor boat was shipped from Cleveland to Boston Tuesday. Mr. Speare, who is part owner in the boat, will have charge of all arrangements for racing the Winton, but Mr. Winton will probably handle it himself, in some of the races at least.

Hurt Cranking Engine—C. A. Weiberg, a lawyer living at Peoria, Ill., met with a peculiar accident at Averyville recently. Weiberg was attempting to crank his engine with the spark advanced and the starting crank, flying back, caught him a hard blow directly in the middle of his forehead, knocking him out for several minutes. The wound bled so that he had to hop into the car and hurry to Peoria for medical aid.

Found Not Guilty—Barbee S. Hook, a young millionaire of Los Angeles, Cal., has been found not guilty on the charge of manslaughter for running over Miss Margaret Birtwistle with his automobile on March 26 and causing her death. The jury, it is said, practically absolved the driver of a car from responsibility for killing people, establishing the precedent that when a pedestrian crosses the street he takes his life in his own hands and crosses at his own risk.

Farmer On War Path—B. Lyman Smith and a party of friends from Syracuse, N. Y., were held up during a recent trip from Syracuse to Poughkeepsie by a farmer who had a gun and threatened to shoot. The incident took place at Waterville, N. Y. A farmer was in the road in front of the car driving a skittish horse. He had been hunting and a shotgun was in the wagon, resting against his knee. Throwing the gun to his shoulder, he shouted to Smith to stop or he would shoot. The car was stopped. Smith also had the experience of getting lost. He left Poughkeepsie, N. Y., at 6 o'clock on a Wednesday night and had supper at Rhinebeck. The tourists did not realize that they were off the track until the Berkshire hills loomed up in front of them. They stopped at several farm houses but were unable to get any intelligent responses. It was necessary for the women of the party to go to the door, as the farmers were afraid it

was someone who was going to sandbag and rob them. About 3 o'clock in the morning Smith's father found the party, having sent out an automobile to hunt up the lost tourists.

Syracuse Has 300 Cars—It was a surprise to the people of Syracuse to learn that there were about 300 automobile owners in Syracuse. Word was received from Albany last week to the effect that that number of automobile licenses had been issued. It is expected that that number will be greatly increased before the summer is over.

Ruled Off Private Road—Advantage of the decision of a Pennsylvania judge that the builders of private roads connecting with public highways have a right to discriminate as to who shall be permitted to use them is taken by the Coxe family of Butler township, near Hazelton, Pa. Automobiles have been refused the use of a pretty stretch of territory along the mountain.

Motor Boats in Race—Forty motor boats were entered in the races at Baldwinsville, N. Y., Saturday. The races were held under the auspices of the Sagawatha Club over a 3-mile course. A large number of the spectators were present from Syracuse and surrounding towns. The winners in the three classes were as follows: Orange-Ardus, owned by Diefendorf & Kratzer; time, 39:25; Red-Windsor, owned by Cunningham; time, 27:10; Blue-Linus J., owned by Parker; time, 18:14.

Road for Motorists Only—Trustees of the village of Lawrence, L. I., are building a road to the Isle of Wight for the exclusive use of automobiles. The present road is narrow and sandy and hardly sufficient wide to permit two vehicles to pass each other. The old highway will be repaired and turned over to the villagers who will use it as a means to getting to the ocean for their daily bath. A shed, 100 feet long, will be built on the island for the accommodation of the motorists.

Rye Is Dangerous—Police at Rye, N. Y., are charged with working under secret instructions to puncture automobile tires with bullets if they can stop the cars in no other manner. It is said that the first victim of this order was Walter Mongon, of Greenwich, N. Y. The lad accepted an invitation to ride to Rye in a car, and when near that town a policeman attempted to flag them. Ignored by the driver of the automobile, the cop is said to have opened fire on the car. The bullets failed to puncture the tires, but one of them did land in the fleshy part of Mongon's hip. An investigation was demanded, but the police say they know nothing of the incident.

Road Makers To Meet—Port Huron, Mich., has been selected for the national convention of the American Road Makers. The dates selected are August 29, 30 and 31. Horatio S. Earle, Michigan's state highway commissioner, has charge of the arrangements and is planning to bring the farmers and motorists together for the purpose of advancing the work of the association. A peculiar system of races is planned by Commissioner Earle for the convention. Starts can be made from any part of Michigan or the United States at points at least 25 miles distant from Port Huron. The driver must telegraph the hour of starting and must make affidavit as to the time. He must report at the Harrington hotel, where the judges will sit on August

29 and 30. Some fifty prizes are promised. As a temporary committee Dr. E. E. Smith, of Detroit, has been made chairman and George E. Miller secretary. H. M. Leland, Roy D. Chapin and Henry Ford are others on the committee.

To Tour Europe—Plans for an extensive tour of Europe have been made by Ohioans. In the party will be George P. Jones of the First National bank, Findlay; Hiram P. Crouse of the Toledo Times; Moulton Houk of the Ohio Central lines and several newspaper men.

Motor Teacher Injured—A peculiar accident occurred July 18 at the Clarkson School of Technology at Potsdam, N. Y. Professor Graffin was giving a demonstration of the working of an automobile when a wrench flew from the machine and struck him in the head, crushing one side of the face. He was taken to the hospital and one eye was removed.

Tavern Keepers Interested—Automobiling has had a beneficial effect on the country taverns around Syracuse, N. Y., and landlords are beginning to sit up again and take notice. In the old bicycle days the tavern keepers thought they were going to get rich, but when the touring declined their hopes were dashed. Now that automobiles are speeding along the country roads they are beginning to rake in the shekels. One of the country landlords was in Syracuse the other day spending several hundred dollars for new furniture for his hotel. He took back with him also several cases of champagne.

High Price for Hogs—Hogs at \$100 a throw come pretty high for a motorist, especially considering the fact that it was the common garden variety and not a road hog. William Muir, of Lexington, Ky., recently had to dig down deep and rip off one of the yellow-backed bits of paper issued by your Uncle Samuel and hand it over to the clerk of County Judge Bullock's court. Muir was charged with running over and killing a hog belonging to Mrs. Francis Brock, but the fine was assessed for traveling at a speed greater than 15 miles an hour.

Driving Dolson to Coast—Driving a Dolson car, Homer N. Ford, of Eagle, Alaska, and formerly of Albion, Mich., is now touring from Charlotte, Mich., to Portland, Ore. His early experiences getting out of the state of Michigan were anything but pleasing to him, according to the letters he has written the factory. One bit of road was so bad that it took him 4 hours to travel 15 miles. "Most of the way I was on my slow gear and in spots the road was so deep I had to sight across the fence rails to see if we were moving at all," he wrote. The work of the Dolson climbing hills made a hit with Ford.

Are Considerate Motorists—Members of parliament and other prominent Englishmen are numbered in the League of Considerate Motorists, recently formed in Great Britain, for the encouragement of careful driving and consideration for the public. A small executive committee, consisting of S. F. Edge, Captain Corbet and Scott Montagu, has been appointed and the organization now seems to be on its feet. Among those who are affiliated with the league are Earl Amherst, Colonel H. Stratton Bates, the Honorable Arthur Stanley, Walter Carlile, M. P.; the Honorable Lanslot Lowther, M. F. H.; Percy Barlow,

Captain B. D. Corbet, Sir James Malcolm, H. S. Boden, R. D'Oyle Carte, Admiral Sir John Fullerton, K. C. V. O.; Honorable James Hozier, M. P.; Henry Norman, M. P.; Sir Charles Cayzer, M. P.; and Kenneth Balfour, M. P.

Wants Street Sweepers—The city fathers of New Orleans are dissatisfied with the condition of the streets, and have undertaken negotiations looking to the purchase of a number of automobile street sweeping machines. Letters have been sent to all the more important manufacturing establishments asking for data concerning such machines as are already on the market.

Motorphobia at La Salle—Complaint is made by the automobilists of La Salle, Ill., that mortorphobia exists in that section of the country. It has become so serious that a Chicago detective has been engaged, it is said, to run down the mischievous persons who are placing obstructions on the highways. The other night two barrel staves, studded with 4-inch spikes, were discovered by means of a searchlight on front of one car on the road between La Salle and Utica. Barbed wire and broken glass are also reported to have been placed on the road at different times.

Wants Richer Prize List—There has been New York state fair to be held at Syracuse, N. Y., in September. Syracuse expected to have circuit races and to get the big fellows. The only trouble now is with the finances. The Syracuse Automobile Club asks the fair commission to appropriate more than the commission wants to. The commission is willing to give only \$1,000, which would not be half enough. The automobilists are certain they can fill the grand stands and make up for an appropriation of \$2,000. C. A. Benjamin, in charge of the project, says the racing men will not come unless suitable prizes are hung up and the club does not feel like putting up the money for them.

Man-Drawn Motor Car—In Cincinnati a man-drawn automobile is one of the attractions in the business streets. It isn't a really truly man, though, but a mechanical dummy 8 feet in height, who "walks" in front of the automobile, apparently holding it with both hands and pulling it about. This automaton in reality is pushed by the automobile, his arm and leg movement being caused by electric power furnished by the automobile. The automaton moves its head and feet and also nods and winks at pedestrians in order to attract attention to his advertising display. Its ordinary gait is about 2 miles an hour. The dummy was built in Buffalo, it is said.

Morgan's Side of It—W. J. Morgan is against the continuance of the climb up Mount Washington. In a letter Morgan asserts that the reduction of the record from something like 2 hours to 20 minutes 58% seconds shows, in his opinion, that the safety limit has been reached and that further attempts would result in disaster. He thinks, if a climb is deemed absolutely necessary, that Jefferson notch or Franconia notch would serve the same purpose and be far safer. Morgan also wishes to disclaim any responsibility for the toll exacted from each motorist of \$3.60 for each trip up. He says he advised the company to lift the fee for the occasion and take pay in the advertising the mountain road would get, but that the offi-

cials could not see it that way. Morgan wants the trade to understand that he did not participate in the division of the tolls.

Cape May Meet Postponed—Owing to rain last Saturday the Cape May beach meet was postponed until Saturday, when Walter Christie will try for the mile straightaway record.

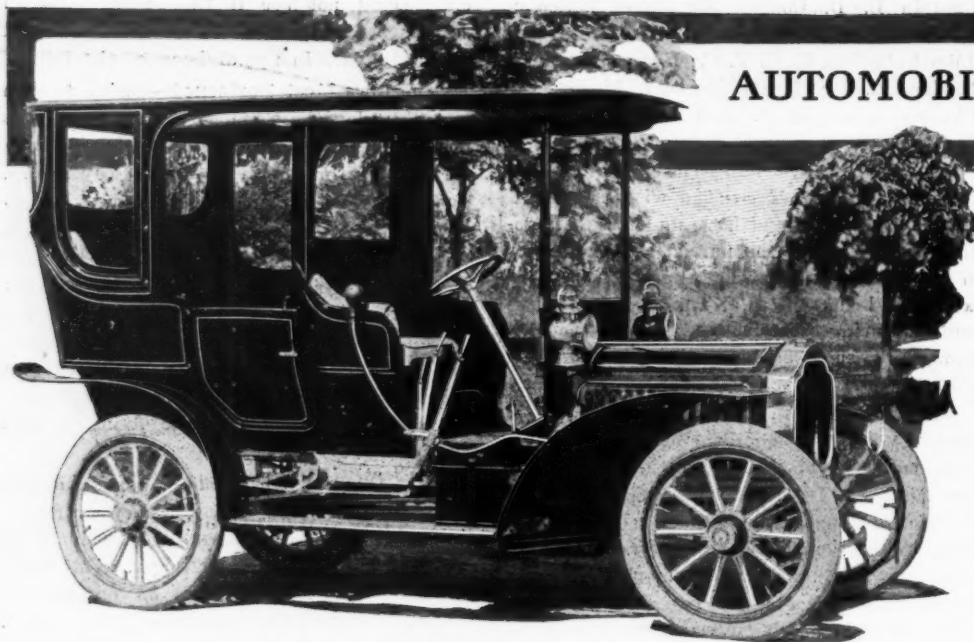
Balked at "Bedelia"—The first chauffeur to be booked under the Chicago ordinance enacted June 20 imposing a fine of from \$100 to \$200 on any person operating an automobile while intoxicated was Max Kundg, 140 Bissell street. Kundg, it is charged, objected to "Bedelia" as played by an Italian organ grinder and swerved into the music maker. He bent an axle and while fixing it was nabbed by the police.

Tally One for Talisman—Talisman, owned by W. Saville, of Boston, won the motor boat race of the Knickerbocker Yacht Club from New York to Marblehead, Mass., a distance of 288 miles, in 28 hours 38 minutes 37 seconds, beating the Glissando, owned by F. L. Andrews, more than 6 hours. The Blink was third, Aquila fourth and Woodpile fifth. The Talisman had a rough voyage and it was largely due to the fearlessness of her skipper that she pulled through. Her only mishap was the breaking of a tiller rope. The crew was kept at the pumps for nearly 24 hours.

Want Speed Regulations Changed—There is a movement on foot among the inhabitants of the outer districts of New Orleans to have the present city ordinances regulating the use of automobiles and the speed thereof altered and made more drastic. At present the rules are: 8 miles within 10 blocks of the center of the city; 12 miles from thence to the limits of the city; in the suburbs, "go as you please." The proposition is to extend the 8-mile rule to the city limits, and make exception only for the parkways and the wider boulevards, where the traffic is divided and there are no car tracks.

Racing Car of Future—A close follower of the racing game suggests that in view of increasing interest in 24-hour races, 1,000-mile contests and other long distance events, and the elaborate arrangements made for them, suggests that soon there will be a long distance racing car of special type, wholly distinct from any other. It will have special hubs and rims and spokes, so that, when tires are worn out, the wheels may be shifted in a jiffy without any necessity of adjusting the bearings. It will be ballasted on the inside to keep it on the trucks when turning corners, have a special body lighted inside and fitted with automatic devices for taking on fuel, food and other supplies while in motion, and be wholly a freak machine adapted to this one use.

Frank Croker's Estate—An appraisalment of the property of Frank H. Croker, who died as a result of injuries received when his automobile overturned while he was training for the Ormond beach races last winter, has just been reported to Surrogate Fitzgerald of New York for determination of the state tax on the estate. Croker left a net personal estate of half a million. His property is entirely personal, the gross amount being \$635,178.60 and the net \$491,386.62. The claim filed on behalf of the heirs of A. A. Raoul, the chauffeur who was also killed in the same accident, was settled by the Croker estate for \$2,383.



SEMI-LIMOUSINE BODY ON A PACKARD CAR

AUTOMOBILE DEVELOPMENT

THE LAWN TANK

The lawn gasoline storage tank is the most recent novelty in the line of vessels for storing gasoline, and is so simple and novel as to be worthy of note. As the name suggests, it is buried in the lawn at any point convenient to where the car stands or passes, not having to be near any building. The Tokheim Mfg. Co., of Cedar Rapids, Iowa, is the manufacturer. The outfit is a cylindrical tank buried in the ground and communicating with the surface through a filling pipe and a brass cylinder forming a pump for withdrawing gasoline. Both of these pipes at the surface of the ground are enclosed in a metal box fitted with lock and key, rendering safe from pilfering by outside parties. Within the box is the handle of the pump. When filling the tank in a car rubber hose connects the pump cylinder and the tank in the car and the pump is worked by hand. Each stroke raises a quart of liquid, 5 gallons being pumped each minute. The pump is made from heavy 2-inch brass tubing and has brass valves. When the tank in the car is filled the handle is pushed down in the box, which action trips the valves in the pump and the gasoline in the hose is siphoned back into the tank. The underground tanks are made of any capacity from 65 to 170 gallons. Before shipment the tank pipes, vent and pump are all joined, so that the purchaser has only to make the excavation and bury the outfit.

PREMIER DOCTOR'S WAGON

The Premier Motor Mfg. Co., of Indianapolis, Ind., has brought out a new type of vehicle termed the doctor's special runabout, which possesses several features well suited to the physician's use. The vehicle is Premier from tires to top, being fitted with the company's vertical air-cooled motor placed transversely across the car in front and driving to the live rear axle through a single chain to the transmission, midway of the car, and by another single chain to the sprocket on the center of the axle. This car differs from other Premier models in the body design. The wheel base is made 90 inches, and 30-inch wheels are used.

Behind the seat is a large rear platform, with rounded carrying

compartment, so made that it is impossible to convert the machine into a tonneau vehicle. The top also is novel in that it uses sectional side curtains, shown in the illustration, so that while the shoulders of the driver are protected from the weather plenty of window space is left to see clearly up and down a side street when going over a crossing, a feature very valuable with physicians who in many cities are permitted to exceed the speed limit and requiring to take crossing at a fast pace.

The car is controlled from within the top, making it unnecessary to open the top in the worst weather, except when entering and leaving the seat. The high and low speed lever is at the inner right end of the seat and the horn and other parts on the steering column. Beneath the seat is carrying space which is reached through a small door in the side of the box.

TRYING WIRE WHEELS

S. F. Edge, of London, Eng., who is so closely associated with the manufacture of the Napier cars, has experimented recently with wire road wheels on touring and racing cars, with the result that they are found to be much stronger than wooden ones, with wheels weight for weight. In the tests the wheels were fitted to a Denison tensile testing machine. Before testing a regular pneumatic tire was fitted to the wooden wheel and the pull applied to the tread of the tire in a line parallel to the axle and opposite in direction to the dishing. The pull was applied gradually and the effects of it on the

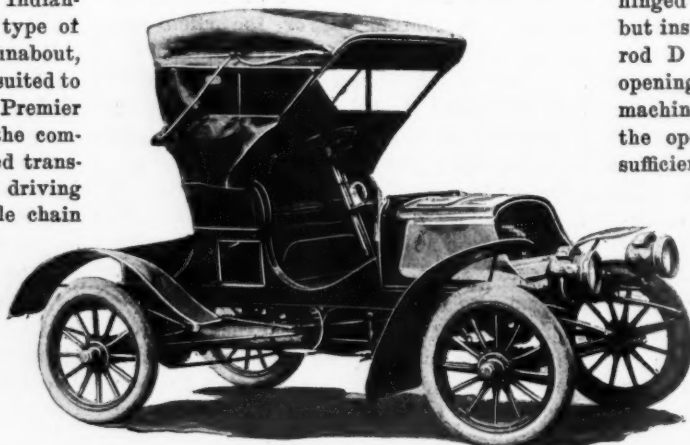
spokes of the wheel noted. When 1733 pounds of pull were applied one of the spokes cracked badly after which the pull was gradually increased to 1,800 pounds, when the cracking constantly increased. The pull was run up to 1,840 pounds, when two other spokes cracked badly, making it apparent that the wheel would never again sustain such tension. The pull was reduced to 1,000 pounds and gradually increased to 1,628 pounds with further cracking. The pull was again reduced to 1,000 pounds and run up to 1,400 pounds with further cracking. The wheel weighed 29 pounds. The wire wheel also tested in the same way weighed 27.5 pounds or 5.5 per cent less than the wood wheel. It stood, however, a test pull of 2,025 pounds, which is just 10 per cent more than the wood wheel stood.

SERVES MANY PURPOSES

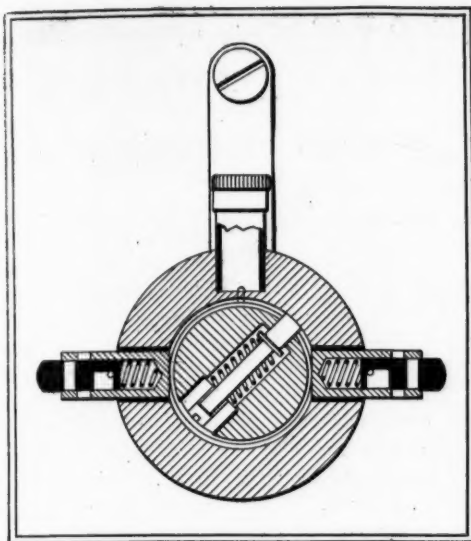
An English concern, the Simms Manufacturing Co., of Kilburn, has brought out a line of automobile buffers, for attachment to the front part of the car frame by which pedestrians are thrown out of the path of a car, in case of accident, without injury. As shown in the illustration, the buffers are two crescent-shaped, tire-like arms located in front of the front wheels. Each consists of a metal frame work supported by curved braces from the front of the vehicle frame. The frame work of the bumper is covered with a rubber casing which contains an air chamber. When the latter is inflated it is possible to strike an object and the force of the collision is overcome to the same extent as when a pneumatic tire passes over a boulder or other obstruction on the roadway. The buffer is a decided novelty and has merit in that it acts as a covering for the front ends of the springs, the spring hangers, the lamps and radiator.

ZENITH IGNITION SYSTEM

The Zenith magnetic make and brake igniter plug is manufactured by the Zenith Novelty Works, of Philadelphia. The casing A is threaded at the lower end to fit any cylinders, and at the upper end is of large diameter for containing the coil, which is carried in the annular space B. The center of the plug is bored out and carries at the bottom one electrode C, while in the opening is the vertical plunger rod with a flat head F resting on top of the armature E, which is hinged at one side to the piece L, rigid with but insulated from the casing A. The plunger rod D works up and down in the central opening through a plunger guide G made of machine steel and just large enough to fill the opening in the igniter. This guide is sufficiently long to hold the compression in the cylinder and at its lowest end has the shoulder M resting upon a corresponding one in the casing A. The upper shoulder bears against the end of a hollow nut N. Between the shoulders and the parts against which they bear are copper gaskets. The armature E is nothing more or less than a circular disk equal in diameter to the bore of the top of the casing A, and in



NEW PREMIER DOCTOR'S WAGON



ATWATER-KENT TIMER

its center is an opening through which the plunger rod D passes. The armature is held in its upper position, as shown in the illustration, by the spring H.

In wiring this igniter one wire passes from the horizontal binding post on the side of the plug to the commutator, and another leads from the binding post K to the primary coil. The coil has to be connected to the battery and battery connected with the motor. In starting an engine fitted with this igniter the crank shaft is turned over so that the commutator closes the circuit to one of the cylinders, at which instant the armature E is attracted and drawn even with the top of the casing A, at which time the plunger rod D because of its own weight and the action of the spring H drops until it rests upon the end of the electrode C. At the instant the commutator breaks the circuit the armature E is immediately released and rising under the influence of the spring raises the plunger rod D off the top of the electrode C. The tendency of the current to follow the rod D results in a spark taking place between points C and D.

THE ATWATER-KENT TIMER

The Atwater-Kent Mfg. Works, of Philadelphia, has added to its line of electrical apparatus a timer for multi-cylinder motors. The body part is made of cast iron with similar bearings for the central revolving part, which is made of phosphor bronze. In the timer, illustrated, only two contact points are used, the outer end of each forming the binding posts. The contacts in these are hardened steel, separated from the body of the timer by a fiber bushing. The revolving

brush is made of hardened steel and rubs alternately against cast iron and steel contacts. At the top is the lever for adjusting the timing and on the top is a stud for attachment of the spark advance device. Beside this lever is an oil cup, which keeps the revolving shaft lubricated at both ends of the bearing.

A SEMI-LIMOUSINE

The semi-limousine is a style of body that has advantages over the limousine for summer use and carries most of its advantages for winter running. This style of car has recently been built by the Packard Motor Car Co., of Detroit, Mich., according to the design of Clifford Elliott, of that city, for whom the car was built. The difference between this and a limousine is that the doors are low, as in a touring car, the space above being open for the admission of fresh air. Behind the rear seat and at the sides, also, are glass panels, with the glass pivoted, so that it can be run up along the ceiling of the canopy, giving all the features of a canopy car and allowing free air current to pass in over the driver's seat and back through the tilting glass opening, behind his seat. In front of the driver is a tilting glass and at the sides drop curtains for inclement weather.

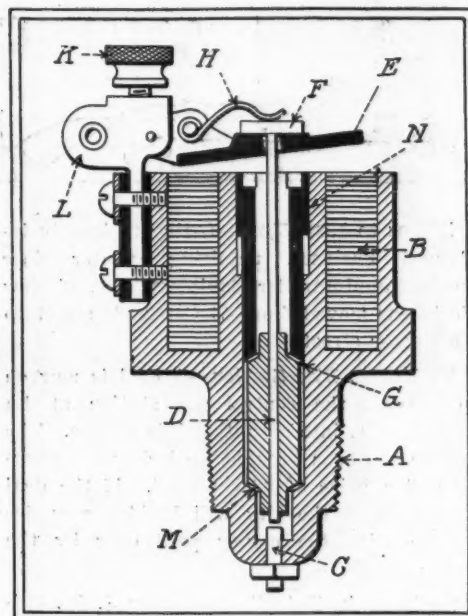
DEVELOPMENT BREVITIES

The Michigan Automobile Co., of Kalamazoo, Mich., is circulating a four-page folder on its models D and E. The folder illustrates the machines, gives brief specifications, and contains letters of commendation from many users.

For those interested in the making of good roads, the state of Ohio has issued a book on the construction of country roads. It contains twenty pages of information on the construction of rural roads, the cost of such construction and the approximate duration of such roads. The book is prepared by Sam Houston of the state highway department, Columbus.

The National Association of Engine and Boat Manufacturers has issued a booklet on the racing rules of the association for 1905. Important features of the book are the formulas for the proper rating of motor boats, table of time allowances for 1 nautical mile and tables of areas, speeds, etc. The offices of the association are at 314 Madison avenue, New York.

Pond's Extract Co., a well known trade name, with American offices at 76 Fifth avenue, New York, has come to the rescue of motorists who may meet with wayside accidents with an emergency case so brim full

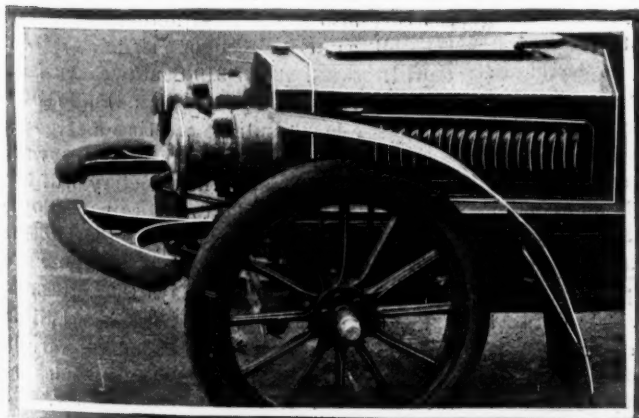


ZENITH IGNITION SYSTEM

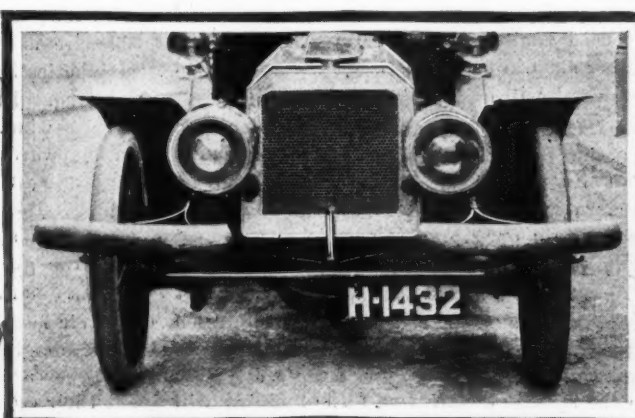
of bandages, gauze, bandage shears, adhesive plaster, ribbon bandage, triangular bandage, bandage pins, first-aid book, surgical tweezers, antiseptic lintine and a few other instruments, all essential when accidents occur, as to merit for it the name of pocket physician. Three different sizes of cases are manufactured, all of which are neat leather bound pocket sizes, specially suitable for automobile, railroad or other traveling where accidents are liable to happen.

The use by touring and other motorists of non-fluid oils is being pushed by the New York & New Jersey Lubricant Co., of New York, N. Y. These lubricants do not drip or waste like ordinary oils and have good wearing qualities, according to the company's claims. They are in the form of heavy greases that can be packed in the bearings, and which endure for weeks.

A useful device is the Wilson dashboard automobile clock, made by the Wilson Automobile Clock Co., of Philadelphia, and sold by the Electric Contract Co., of New York, and regularly carried in stock. The dial of the clock inclines at a 45-degree angle making it easily visible from the seat. Above the clock is a flash electric lamp for night use. The pressure of a button on the side of the seat, or in any other part of the car, connects an electric circuit and turns on the light, which is thrown on the dial. The battery supplying the electric current is sufficient for a season's ordinary work on any size of car or motor boat.



SIDE VIEW OF FENDERS



AN ENGLISHMAN'S IDEA OF PROTECTING A CAR

THE FENDERS FROM THE FRONT



AMONG MAKERS AND DEALERS



Moves to New Store—Owing to largely increased business, requiring greater floor space, the Motor Car Equipment Co., of New York, has moved from 43 Cortlandt street to 55 Warren street.

To Utilize Fire Station—A deal is now on to convert the central fire station at La Crosse, Wis., into an automobile garage. The matter has been brought up before the council and a price of \$8,000 fixed. If the deal goes through the city will build a new fire station with the money paid over by the motor people.

To Meet in Detroit—Secretary J. W. Gilson announces the semi-annual meeting of the Motor and Accessory Manufacturers at Hotel Cadillac, Detroit, on August 4, when the association will consider matters of importance, passing on applications and discussing the big shows scheduled for next winter.

Quakers Like Prest-o-Lite—Prest-o-Lite gas tanks have made such a hit in Philadelphia that Paul P. Rippien, distributor in the Quaker City district, has found it necessary to move into greatly enlarged quarters at 327 North Broad street, his former depot at 633 North Broad, which he secured less than 3 months ago, having become entirely inadequate to accommodate the growth of the business.

Vacation for Tradesmen—Many New York tradesmen are now away on their vacations. Percy Owen, of the Winton branch, is at the Belgrave lakes in Maine; Manager Lineburger, of the Rainier company, is on Long Island. Harry Houpt, the Thomas agent, has taken a cottage at Deal Beach for the rest of the season. I. W. England, the Peugeot importer, has gone to Canada for a month. A. L. McMurty and Chester Boynton, of the New York Motor Co., spends each week-end on the Jersey coast.

All Ready but Roof—The concrete roof of the Moulton-Jordan Motor Car Co.'s new garage on Fourth street, between Second and Third avenues in Minneapolis, is being put on. When it is completed the building will be ready for occupancy. It will cost \$21,000 and be strictly fireproof. The building has a frontage on Fourth street of 42 feet and runs back 157 feet. It is two stories high, with a deep dry basement. The first floor will be used for offices and salesrooms, with the repair shop in the rear. The second floor and basement will be used for storing purposes.

Garage for Cooley House—It is expected by the Springfield, Mass., Automobile Co. that its new Cooley house garage will be modern in every detail. Although the building is only one-story high, it is so arranged that extra floors can be added if needed. The new place is 100 feet wide and 117 feet long, with a floor space of nearly 12,000 square feet. It has almost a solid plate-glass front. There is room for seventy-five cars in the storage department. The building will be almost fireproof, with the gasoline tank located underground. This will be the third

location of the company since it was organized 5 years ago by Jager & Anderson. It first located at 24 Main street, but 3 years ago, searching for larger quarters, it was forced to move to 60 Main street.

Wheeler in Motor Trade—Harry Wheeler, well known to cycle racing fame in the days of Arthur A. Zimmerman, is now in the automobile trade, having just been installed as manager of a New York garage owned by Thomas E. Schultz.

Long Ride on Handcar—Anzel Ames, Jr., accompanied by O. C. Owen of Cleveland, O., recently drove an ordinary handcar equipped with an engine made by the H. H. Franklin Mfg. Co. at Syracuse from Cleveland to Syracuse over the Lake Shore and Central railroads. Mr. Ames is superintendent of signals on the Lake Shore and is interested in the construction of a motor car for railroad inspection. He drove the hand car with the Franklin engine at a speed of 45 miles an hour.

Side Entrance White Car—The White Sewing Machine Co. announces a new model for 1906 in the Model F, to be sold at \$2,800, the distinguishing feature of which will be a side-entrance body. This change in body construction will allow of a considerable lengthening of the wheel base, a remodeling of the burner so as to eliminate the necessity for side flues, together with a few minor changes tending to increased efficiency and convenience of operation. The side doors are of liberal width. The wheel-base is 114 inches, all of the increase over the former length of 93 inches being used in making a roomy body and wide doors. The rear of the body is so shaped as to deflect dust. Under the rear seat is a storage compartment of ample proportions, opening from the rear. The engine, the generator and the transmission mechanism are identical with that used in the recent model. The principal mechanical change is in the burner. The base of the burner is without perforations and the only air which is admitted is that which is mixed with the gasoline vapor in the induction tube. The fire is thus absolutely protected and it is practically impossible for it to be blown out, regardless of the velocity or direction of the wind. The products of combustion pass upward between the coils and, instead of issuing through side flues as in former models, pass downward through an annular flue which surrounds the generator. By the time the gases have traveled to the bottom of this flue they have given up practically all of their heat and, as they are widely diffused because of the liberal dimension of the down-flue, they are dissipated in the open air without their escape being in any way noticeable. Other new features of the Model F White are an inside overflow for the water tank, which

readily permits of flushing and prevents overflow, and compensating brakes. In the latter a continuous wire cable is substituted for brake rods, the arrangement being such as to insure under all conditions an equal application of the brakes on both rear wheels.

Holder of Intercity Records—The Franklin car now holds the following intercity records: San Francisco to New York, 32 days, 17 hours and 20 minutes; St. Louis to New York, 5 days, 21 hours; Boston to Buffalo, 31 hours and 40 minutes.

Handles Wayne in Denver—Temporary quarters at 1432-1438 Court place have been secured by the Denver Automobile and Garage Co., which is western agent for the Wayne. F. A. Trinkle is vice president and general manager of the garage. Renting and storing will be featured as well as the retailing of the Wayne.

New Bids Asked For—Justice Kenefick has authorized Receiver Wheeler of the German bank, to dispose of the plant of the Kensington Automobile Co., of Des Moines, Ia. The bank has a claim of \$9,000 against the concern and the appraisers have placed a valuation of \$7,800 on the property. The best bid made for it was \$3,600 in cash by Alfred B. Allen. Other bids will be asked for by the receiver.

Gear Output Increased—It is expected that the New Process Raw Hide Co., of Syracuse, N. Y., will have the new addition to its plant ready for occupancy by September 13. The new building, which will be two stories high and 80 by 60 feet, will be used exclusively for a machine shop and will, it is said, practically double the capacity of the plant. The company reports that it has already closed some good contracts for gears and noiseless rawhide pinions for 1906.

Glee in Kansas City—Owners of garages in Kansas City, Mo., are chuckling these days over the good year they have had. The demand, it is reported, has been almost exclusively for touring cars, few runabouts being seen on the streets. Almost three times as many cars are represented in Kansas City as was a year ago. At least 20 per cent of those sold ranged higher than \$2,000. Quite a demand for trucks has also sprung up and the Depot Carriage & Baggage Co. will handle them in the near future. Kansas City also has several automobile livery, as well as a number of sightseeing cars. Caps Brothers, at 317-319 Southwestern boulevard, have just secured an addition of 30 acres of ground and are erecting a large factory. While they only manufactured seventy-five cars this year this new factory will have a capacity of from 300 to 500 cars, employing 500 men in the manufacture of touring cars, delivery cars and heavy trucks. The Farmers' Auto Motor Co., of Hays City, Kas., has a branch office in the New Ridge building and will start September 1 making farming automobiles. Among the new agencies are the following: Reo Automobile Agency, 1421-23 Walnut street, L. H. Stark manager. Greenlease Automobile Co., 217 East Fifteenth

street, western sales agent for the Buick. Depot Carriage & Baggage Co., Fourth and Wyandotte streets, representing the Rambler in fifteen counties and also general western agent for the National; Frank W. Schooley manager.

More Room for Liberty—The Liberty Automobile Co., of Pittsburg, has developed its business so rapidly this summer that it has found it necessary to enlarge its facilities by building a large addition. Dr. T. S. Gamble, president of the company, is now in the east making contracts for next year's cars.

Moving in Chicago—The Buick Motor Car Co. has established its Chicago headquarters in the quarters recently occupied by the Githens Brothers Co., agent for the Oldsmobile. The place has been enlarged and redecorated and a line of samples has been installed. The Githens Brothers Co. and the Electric Vehicle Co. have moved into their new stores on Michigan avenue just south of Twelfth street and adjoining the White and Packard headquarters.

Plan a Big Place—A new garage will be established by the Crescent City Automobile Co., in South Rampart street, New Orleans. Plans for the new structure have been accepted by the company, and the contract has been let to Charles A. Sicard for the demolition of the buildings at 217 to 223 South Rampart street, near Tulane avenue, and also for the erection on the premises of a garage, which is to be equipped with all modern conveniences for the sale, storage and repair of

automobiles. W. Philip Johnston is the president of the Crescent City Automobile Co., and Charles U. Kennedy is the sales manager.

Building at Akron—E. D. Valentine and E. G. Schaeffer are interested in the Union Automobile Co., recently started at Akron, O. They are building on College street and will have a complete garage and repair shop going by August 15.

Seeks Pontiac Site—It is reported from Pontiac, Mich., that the Soules Motor Car Co., of Grand Rapids, is searching for a site for a factory in Pontiac. President Dykhouse and John Soules recently visited the place and talked with the business men of the town relative to the transfer of their plant.

New Alliance in Gotham—Perry Owen and Robert E. Fulton, managers respectively of the New York branches of the Winton and Pope companies, and W. Irvine Fickling have just formed the automobile Cover & Top Mfg. Co., with headquarters at 148 West Fifty-sixth street, New York. They are handling the Gabriel horn, a new cape cart top and slip covers.

Organizing at Oswego—The Ontario Garage Co., of Oswego, N. Y., is in process of formation. The concern is in the nature of a subsidiary company to the Oswego Steam Carriage and Boiler Co. L. W. Mott, Karl Kellogg, A. P. Murdoch and Patrick R. Keating are prominent in the formation of the garage company, which has already rented the property north of Mathews' livery stable to be used for repairing automobiles, motor boats,

as well as for garage purposes. There is talk of later establishing an automobile factory, building the body there and using the Oswego steam boiler.

Trade Slow—A French consul in Hungary reports the progress of the automobile trade in Hungary is very slow and that there seems to be a lack of automobiling enthusiasm. During 1903, fewer than sixty foreign cars were imported, the majority being Austrian vehicles of low price, nine cars being the total of the French contribution.

Economical Traveling—The Knox Automobile Co. furnishes the following information about its truck that went through the Glidden tour: Distance traveled, 1,001¼ miles; running time, 68 hours 35 minutes; average speed, 14½ miles per hour; amount of gasoline consumed, 107¼ gallons, at 20 cents per gallon, \$21.45; lubricating oil, 17 gallons, at 50 cents per gallon, \$8.50; two chain links replaced, \$1; one exhaust valve replaced, \$3; total operating expense, \$33.95.

Sues Olds Makers—Suit has been brought by Warren T. Walker, until recently junior partner in the firm of Winston & Walker, dealers in automobiles at Minneapolis, against the Olds Motor Works for \$5,500, the cash equivalent, he claims, for an alleged breach of contract which deprived him of the Olds agency and gave it to Winston. Walker claims that when the concern was dissolved a contract was signed between himself and the Olds company giving him the exclusive agency for Minnesota and western Wisconsin.

THE READERS' CLEARING HOUSE

MAGNETO IGNITION

Chicago—Editor MOTOR AGE—My car is equipped with magneto ignition, with five cells of dry battery for emergency. The machine has not operated properly and I desire to displace this ignition outfit with four vibrator coils. Can you give me directions for producing this change?—R. C. W.

Magneto ignition in some form will most assuredly be the spark producing factor on the motor car of the future. No doubt the manufacturers are producing the best article they know, but the fact still remains that although the machines may be technically perfect they certainly are not mechanically perfect. A great many are having entire satisfaction with magnetos, while others have nothing but trouble. Undoubtedly when the magneto is perfect and properly adjusted, more speed and power can be obtained than when coils are used. The magneto on your car is either chain or gear driven and rotates its driven shaft at the same speed as that of the engine crank shaft. Its distributor shaft rotates with the cam shaft at half the motor speed. The circuit breaker you will use must be driven at one-half the motor speed. Have a gear made with twice as many teeth as the one that was on the magneto armature shaft and if chain is used get a sprocket with twice as many teeth. Have a hole in this gear to fit a piece of five-eighth inch cold-rolled steel, and have the other end turned to fit the circuit breaker cam. Get a pattern made with a base similar to that of the magneto and to bolt on the same place. To get the distance from the circuit breaker shaft center to the base, place the new gear in mesh with the gear that formerly drove the mag-

neto and when properly in mesh with the shaft in place measure to the base where the magneto was bolted to the car. If a chain is used pass a chain over both sprockets and with the shaft horizontal, measure down. The circuit breaker shaft will rotate in the opposite direction to that of the magneto distributor shaft. This must be considered so as to have the proper cylinder fire. The wiring will then be arranged as with any four cylinder coil.

PLAIN BEARINGS

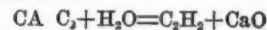
Logansport, Ind.—Editor MOTOR AGE—There has been a good deal of discussion from time to time on the question of bearings for automobiles, some taking the position that, all things considered, plain bearings were the equal of either ball or roller bearings for road cars, admitting that for racing cars either of the two would be preferable. Will you give, through the Readers' Clearing House, the facts in the case?—E. E. V.

Plain bearings require more power to propel a car than ball or roller bearings. The two latter are practically anti-friction bearings with the ball-bearing a little in the lead. The roller-bearing has proven itself more serviceable for heavy cars than the ball-bearing. The plain bearing needs no adjustment and if properly lubricated will last indefinitely with no attention. The other bearings will ruin themselves if not kept fairly well in adjustment. The ball and roller bearings are packed in grease, so if the bearing is of ample size for the load, and they are properly applied, they should not require attention more frequently than once in 1,000 miles. Unless the plain bearing receives oil constantly it will run hot and bind.

PROPERTIES OF ACETYLENE

Toledo, O.—Editor MOTOR AGE—Of what is calcium carbide made; what are its properties and is it dangerous?—W. C. A.

Acetylene gas— C_2H_2 —is formed by the action of water, H_2O , on Calcium carbide— CaC_2 —as follows:

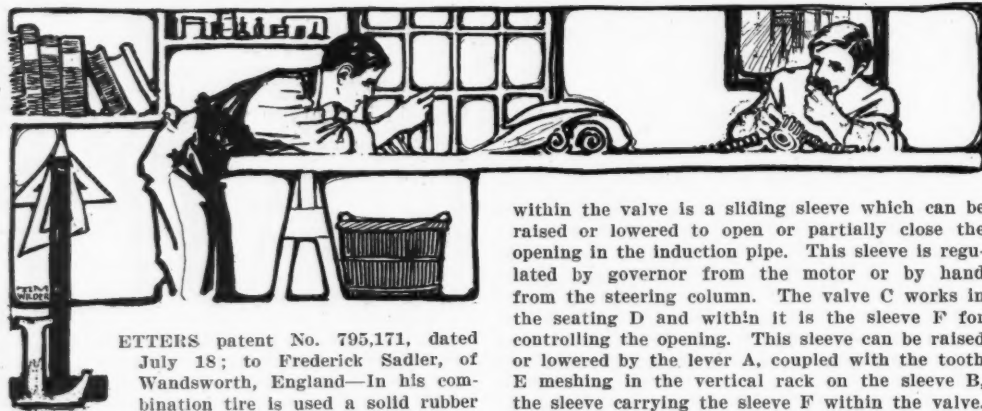


The residue is calcium oxide. The gas is soluble in a ratio of one to one in water and when in contact with acetone— C_2H_5O —is soluble in the ratio of 300 volumes of the gas in one volume of acetone. That is how the gas tanks for acetylene light contain so much gas. Acetone itself is a hydrocarbon. To form the gas requires ½ pint of water to 1 pound of the carbide, which results in 5 cubic feet of gas. When under a pressure of 700 pounds at a temperature of 60° Fahrenheit it liquefies, and it does seem that some enterprising spirit would liquefy it and place it on the market in steel capsules.

If this were done many times the volume could be carried in the same space and under the weight as at present, where it is dissolved in acetone. To develop 10 horsepower for 100 hours would require 1,000 pounds of calcium carbide.

The gas is non-corrosive, is not poisonous, and will not explode unless under pressure. It cannot be detonated—that is, exploded—by a jar. The gas requires twelve and one-half volumes of air for its complete combustion and is quite sensitive as to mixture. Too little air produces flakes of carbon, while too much air gives a non-explosive mixture. The price of carbide makes its use prohibitive for power purposes.

CURRENT AUTOMOBILE PATENTS



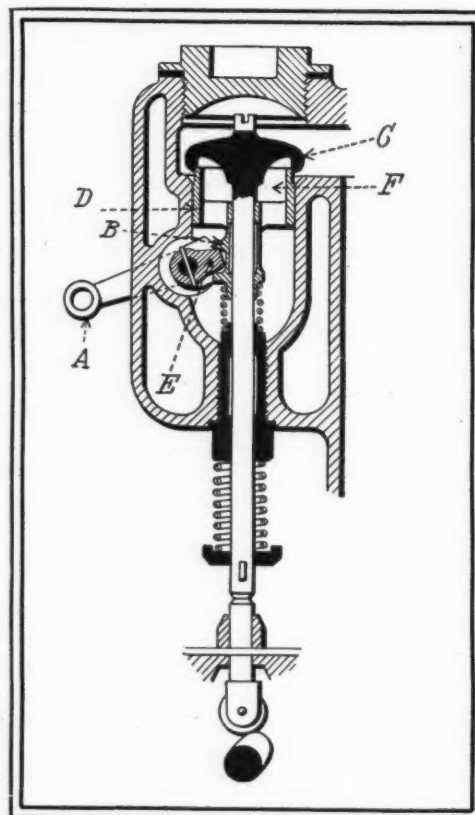
LETTERS patent No. 795,171, dated July 18; to Frederick Sadler, of Wandsworth, England.—In his combination tire is used a solid rubber tire and a surrounding tread for protecting it. The solid rubber band, or pneumatic tire if desirable, rests in a groove on the rim of the wheel. Bolted to the sides of the wheel rim are side plates with a shoulder at the outer end. On top of the rubber tire and between these plates is an elastic cushion resting at the sides against the shoulders on the side plates. Outside of this cushion are wood blocks resting upon the cushion and held in place by segmental plates within the side plates on the rim. Both the blocks and the plates are slotted and held in place by cross bolts passing through the slots, the slots being to allow the blocks to move towards the axle of the wheel and out again according to the elasticity of the tire.

Letters patent No. 794,951, dated July 18; to Albert E. Schaaf and Volney E. Lacy, of Toledo, O.—The inventors' carbureter has a horizontal passageway, with the air entering at the left, a vertical spraying nozzle in the center and a vertical pipe at the right end leading to the motors. Between the spraying nozzle and the pipe to the motor is a sleeve open at the top to admit air from the casing above the nozzles without its passing through the small tube past the nozzle. Within this tube is a sliding tube with V-like perforations for regulating the amount of air admitted from above the nozzle. A similar tube is used for controlling the passage of gases to the motor, both tubes working from the same plunger rod either operated by governor or by hand, the object of connecting the two sleeves to the one plunger is that the admission of additional air and the passage of gases to the motor shall be controlled at the same time.

Letters patent No. 794,927, dated July 18; to Everett B. Cushman and Leslie S. Cushman, of Lincoln, Neb.—The carbureter has a separate float and mixing chamber. In the former is a float with needle valve in the casing wall of the chamber. To the top of the float stem is pivoted the end of a rocking shaft, the opposite end being pivoted to the top of the float controlling valve for regulating the flow of gasoline to the float chamber. In the mixing chamber the air enters at the bottom and the vapor exits from a side port near the top. In the chamber is an adjustable valve seat and means for locking it in position. A cylindrical valve is placed within the seating. Air inlet ports are at the base of the valve casing and vapor discharge ports at the top.

Letters patent No. 794,859, dated July 18; to Auguste Gosse, of Petit-Bourg, France.—The inventor's method of varying the opening of the inlet valve in a gasoline motor is new. The valve is mechanically operated, or otherwise, and is always permitted to open to the same extent, but

within the valve is a sliding sleeve which can be raised or lowered to open or partially close the opening in the induction pipe. This sleeve is regulated by governor from the motor or by hand from the steering column. The valve C works in the seating D and within it is the sleeve F for controlling the opening. This sleeve can be raised or lowered by the lever A, coupled with the tooth E meshing in the vertical rack on the sleeve B, the sleeve carrying the sleeve F within the valve.



GOSSE'S INLET VALVE

Letters patent No. 794,815, dated July 18; to Frank A. Selberling, of Akron, O.—The inventor has a solid rubber tire with cross bolts imbedded in the base; the bolts not reaching to the edge of the tire lips are used in retaining it on the wheel. On the wheel rim are two hooklike flanges, one rigidly secured to the rim of the wheel and the other embedded in the rim and hinged so as to let the tire be placed on the rim after which it is clamped in position.

Letters patent No. 794,735, dated July 18; to Samuel R. Payne, of Riddleton, Tenn.—The invention is a lifting jack with a vertical standard which has not the usual racks for lifting with. On the standard is a lifting head with a bow shaped slot in the side thereof and beneath it two run-

ners. On the head piece is an operating lever and from near the point where the lever is pivoted is a downwardly projecting pin that communicates with the lower runner. From the head piece is also a downwardly projecting pin that communicates with the upper runner. The two runners are used in clamping the standard while the top piece with the operating lever is left to carry the load. The object of the jack is to do away with a rack and have a plain standard with runners for friction purposes to do the lifting.

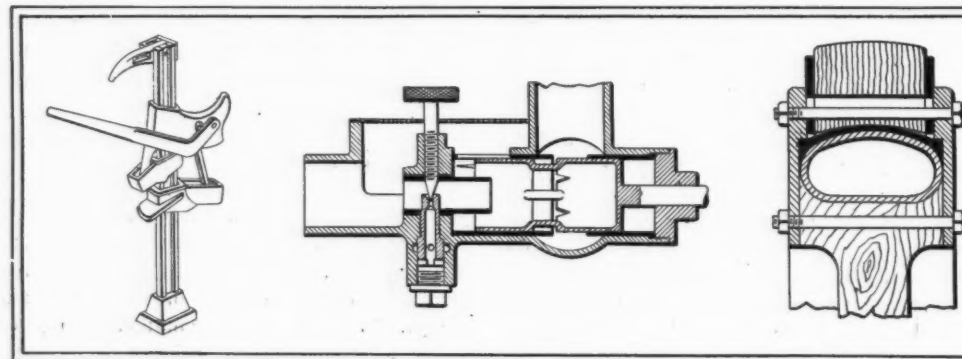
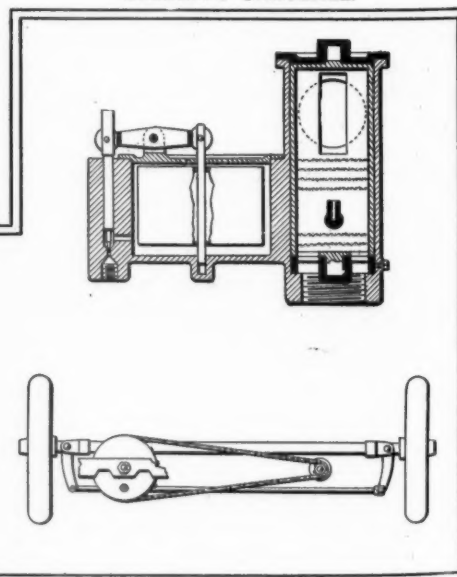
Letters patent No. 794,716, dated July 18; to James E. Kimble, of Vicksburg, Mich.—The inventor's steering gear makes use of similar steering knuckles, spindles and connecting rod from the knuckle arms. On the axle is a drum with two grooves in its periphery and at the base of the steering column is a sprocket. From the sprocket to the drum is a double wire rope passing twice around each. The drum is connected by bolt with the rod connecting the knuckles so that a turn of the steering wheel turns the sprocket at its base which communicates with the drum and so moves the connecting rod to the knuckles.

Letters patent No. 794,725, dated July 18; to Ernesto Mari, of Buenos Ayres, South America.—The wheel tire, referred to, has concentric sections of loosely connected blocks like one tire of blocks within another. Between these tires of blocks are flexible connections of rubber pads or coil springs.

Letters patent No. 793,786, dated June 4; to Albert H. Helme, of Springfield, Ill.—The invention is a carbureter in which a float chamber is dispensed with and the ordinary type of spraying nozzle replaced by one resembling the sprayer on the spout of a water tank. The carbureter casing is a vertical cylinder, with the air induction pipe entering the center of the top and reaching nearly to the bottom, where it carries the inverted spraying nozzle with perforations on its upper side. Out of one side of the top of the casing is a pipe that leads to the motor. Air is forced through the induction pipe and through the perforations in the nozzle, after which it filters upwards through the gasoline to the surface. Surrounding the lower part of the induction pipe are several collars and resting on the collars are circular plates, equal in diameter to that of the gasoline cylinder and resting in the fuel. As the air rises through the liquid it passes through the perforations in these plates and is broken into smaller particles and gradually mixes with the gasoline, so that when the surface is reached the mixture is practically complete.

Letters patent No. 793,929, dated June 4; to Norman T. Harrington, of Detroit.—This invention consists in the combination of a brake drum enclosing a planetary transmission for use in automobiles. The transmission gears are enclosed within the drum of the brake. Two brake shoes, segmental in shape, enclose the drum. One end of the shoes is pivoted in place and the other end is attached to parallel levers used in applying the shoes to the drum. The shoes are held away from the drum by a coil spring between the levers and are connected with it through a fulcrumed lever and linked chain.

CUSHMAN'S CARBURETER.



PAYNE'S JACK

SCHAAF AND LACY'S CARBURETER

SADLER'S TIRE

KIMBLE'S STEERING KNUCKLE

LEGAL SENSE AND NONSENSE

ON 60-DAY TRIAL

The ordinance adopted late in June by the commissioners opening the driveways of the Golden Gate park, San Francisco, to the use of automobiles has gone into effect. The park authorities have been careful in drawing up their regulations and during the 60-day test of the ordinance the owners and drivers of the automobiles must observe the rules. Between the hours of 6 a. m. and 6 p. m. motor vehicles will be allowed on the main driveway, the middle driveway, the south driveway and that portion of the great highway south of the intersection of Fulton and Stanyan streets. Automobiles will not be permitted on the following roads: The road to Strawberry hill, to the music stand, the observatory, the speedway, the north drive and the panhandle. Chauffeurs shall wear their state badges pinned on the right side and in plain view of the special policemen. All mufflers must be closed while the machines are in the park and conductors of automobiles will bring their machines to a full stop when signaled by a park officer. It has been mainly through the efforts of the Automobile Club of California that the above concessions have been granted and if nothing unfavorable occurs during the 60-day trial the temporary experiment may result in the granting to motorists of the permanent use of the park roads.

ROAR IN MILWAUKEE

There's a roar in Milwaukee and the tag law is to blame. There is an ominous disquietude in the ranks of motor car owners. And there may be what General Sherman said war was to pay before it's over. The revolutionists objected to the stamp act. The automobilists are objecting to the tag act just as strenuously and war may break out yet. Peaceful, law-abiding citizens that they are, they are willing to put on tags any time the legislature, common council, town board or sidewalk inspector says so. There isn't a machine in Milwaukee now that isn't tagged. But when it comes to putting on placards the size of bill boards they balk. If that much space is to be taken up they might as well sell it to an advertising agency and get good money for it, they argue. For the governor and his satellites want signs some 16 by 18 inches or bigger tacked to every automobile within the confines of the great and glorious state of Wisconsin. Any wonder there's a kick? A whole bunch of the fellows up there say they won't do anything of the kind. The grand jury's in session. The sheriff is a half-breed, just like the governor. What, oh, what will be the outcome?

CLUB WILL FIGHT

At a recent meeting of the Automobile Club of Kansas City, there was a long discussion concerning the new automobile ordinance, especially in reference to the payment of license fees. The officers of the club sent circulars to all the club members, which read as follows: "At a recent meeting of club members it was decided that the time had come to test the ordinances and some of the arbitrary rules which the city has attempted to enforce against automobiles. On behalf of club members in good standing it has been voted that the ordinance requiring operators to qualify and obtain a license will not be complied with. The ordinance now in force

is unreasonable and arbitrary; the license inspector realizing this agreed to have a new ordinance prepared which was done and is now in the hands of the city council for its approval and action. Until this has been acted upon members will be protected against payment of license as the ordinance now stands. Last year our members refrained from using the Scarritt point cliff roadway in deference to the wishes of the park board. Since the completion of the western portion of the cliff road entering from Garfield ave-

Automobile Road Maxim

Springfield Union, Springfield, Mass.

Drive slow—through the city streets, or in towns or villages. Fast speed seems dangerous and gives offense.

Drive slow—when passing or meeting trolley cars at rest, or just stopping. Somebody may jump off—a cause of many accidents.

Drive slow—when approaching cross streets, or in turning corners. People often become bewildered at the sight of an approaching automobile.

Drive slow—when meeting teams on the road. This is most important and imperative, and a failure to do so confers the title of automobile hog.

Drive slow—when a dog runs in front, barking, a common menace to touring the country. If the dog stumbles at fast speed a serious wreck usually follows.

Drive slow—when passing churches where services are being held, proper respect in this regard indicating that the automobilist is a gentleman.

Drive slow—when approaching railroad crossings, and be sure you are right before you go ahead. Many accidents have occurred at such places.

Drive slow—when there is any doubt about the road, or possibility of danger ahead. The unexpected happens frequently and it is better to be safe than sorry.

Stop—when approaching a horse that appears to be badly frightened. This is the first and great commandment in automobile touring. You can always avoid an accident by obeying the golden rule.

Stop—when there is a crowd ahead, or when there is an accident of any kind, whether your fault or not. Render all assistance possible, and as a safeguard take the name and address of witnesses.

Don't—try to show off on the public streets, how fast you can go and not run over anybody. Nothing more quickly arouses the resentment and indignation of people against the automobile than such reprehensible conduct.

Don't—toot your horn unnecessarily in driving through city streets, giving the impression that you have a royal right to the road—or that an "automobile hog" is coming. If you drive reasonably there is small need of the horn, which should be chiefly employed in cases of imminent danger, and not for forcing a right of way through crowded streets. It is your duty, not the other man's, to avoid danger.

Don't—attempt to make records on the highways, nor emulate the irresponsible chauffeurs who do risky things to prove their proficiency. Many who have tried it have secured permanent positions in life's subway.

Don't forget—that timid people have more right to drive timid horses on the highways than you have to frighten them by unreasonable speed of your automobile.

Don't—incur the ill-will of anybody in your use of the road, and the wide opposition to the new vehicle, and the obnoxious and unreasonable laws for its regulation, will soon disappear.

nue, the park board has posted signs prohibiting the use of the roadway also. We are agreed that it is about time to determine if we have any rights on the boulevards to which we contribute and have determined to use both of these roads until some higher authority decides that we have no right to do so. Any member being arrested for violation of the rules or ordinances referred to will please notify our attorney, L. C. Boyle, who will take such action in his or our behalf as the circumstances require."

In speaking of the matter, John Swenson, city attorney, said: "The ordinance has been tested in the criminal court. In order to make a test case Fred Patee pleaded guilty to violating each section of the ordinance in police court about 2 months ago and the case was carried up to the criminal court, where it was argued as to the constitutionality of the ordinance. Judge Wofford held that the entire ordinance was constitutional and Mr. Patee was fined \$10 and costs. It is not my intention to persecute automobile owners, but it is my intention to make them comply with the ordinance."

TAX IN ALL COUNTIES

Because of persecution, nearly 200 owners of automobiles in Scranton, Pa., have formed an association to fight the effort to compel them to take out licenses in each county through which they desire to run their machines. A few days ago 116 of them were arrested for failure to pay the Lackawanna county tax of \$2; now they discover they are liable to arrest in every county in which they run machines. They will engage attorneys and take the cases to the Supreme court if necessary in an endeavor to prove that the state law is unconstitutional. There are sixty-seven counties in Pennsylvania and it would cost an automobilist who desired to travel all of them \$134 a year for the privilege, besides his regular state tax. This extra tax is what Allegheny county automobilists have been objecting to for a year and has given rise to much litigation in Pittsburgh.

READY FOR WAR

Lackawanna county, Pennsylvania, officials some time ago got after those automobilists who had failed to take out licenses, in accordance with the law, and no less than 116 of them, residing in Scranton and other portions of the county, were summoned to appear before Alderman Millar to make an explanation. As a result the majority of them ponied up for their licenses, in addition to costs; several others determined to fight the matter in the courts, on the grounds of the unconstitutionality of being compelled to pay both municipal and state license fees, and entered bonds accordingly. The matter will be threshed out at the next session of court.

DRASTIC REGULATIONS

The Republic, of Waterbury, Conn., in a recent editorial commenting upon the fact that the automobile law of the state provides a fine of from \$50 to \$500 or a jail sentence of from 30 to 60 days, or both, says these penalties are the most drastic in the country and will certainly have a good effect upon reckless motorists. The paper believes the jail sentence will be the means of causing more care by drivers.



ROADSIDE TROUBLES

An Ounce of Prevention
Copyrighted by the American Motor League

By Chas. E. Duryea



THE ounce of prevention in roadside troubles should be taken before the purchase of the vehicle is made. Since the automobile is to use rather than to look at, practicability rather than appearance should be the guide in making a purchase and, in connection

with practicability, the roads over which it is to be driven must be considered, for a vehicle that is thoroughly practical on paved streets or perfect roads may be an absolute failure in a deep mud hole or a short stretch of sand. Not only the uses to which the vehicle is to be subjected should be fully considered before purchasing but also whether it is to be cared for by the owner or by a hired mechanic, or whether it is to be stored at some garage and delivered to the driver when called for.

Whether it is to be an electric, a steam or a gasoline vehicle should also be seriously considered. Each of these methods has been developed with certain objects in view and each of them meets the needs of its users in a manner superior to the other methods, provided, always, the user has selected the one best adapted to his needs.

THE ELECTRIC—The electric vehicle is particularly suited to level cities with good streets and to runs of short length in thick traffic and at moderate speeds, and under these conditions it meets nicely the needs of busy men or pleasure seekers or elderly people or invalids, who wish to get their outdoor exercise in a clean, neat, noiseless manner, free from care or exertion and who are satisfied with the limitations of the electric vehicle. The intelligent care of the electric vehicle and the dirty work entailed by this care, are attended to at the charging station, so that all its driver need do is to handle tiller, controller and brake. The smoothness of motion, the simplicity of the motor and the certainty of results render this vehicle particularly attractive to those who have an ever ready servant whose construction they do not care to master.

THE STEAMER—The sweetness of running and ease of control of the electric coupled with a longer range and consequent greater freedom in the matter of speed or distance are found in the steam vehicle. Given fuel, water in the boiler and a fire, the steam vehicle will almost always run. It is probably easier to take care of than the electric, for although more complicated than the gasoline vehicle it is more independent of the charging station or shop than the electric vehicle because it is usually less trouble to attend to the needs of mechanical apparatus like an engine and boiler than of chemical ones, like a battery. The steam motor has been carried to a high degree

of perfection and a working knowledge of the steam engine is found almost everywhere, while water and gasoline can be quickly obtained. The steam vehicle, therefore, carries with it some of the advantages both of the gasoline and electric system, and is on this account preferred by many.

THE GASOLINE VEHICLE—The gasoline system is without question the one best adapted to a wide range of needs and conditions and because of this fact it has achieved the greatest popularity thus far, although both electric and steam vehicles were first in favor. The system is simpler than either the steam or electric and therefore may be cheaper both to purchase, to operate and to maintain. It is, however, a combination of both mechanical and chemical means and has the disadvantages as well as the advantages of both. If understood, its defects are easily remedied but in the hands of unskilled operators a slight trouble incapacitates the vehicle. The gasoline vehicle then should not be selected unless one is willing to master its simple mechanism and thus be able to determine, in case of trouble, what is at fault or unless one employs a skilled operator. If mastered it becomes at once a most obedient servant. It uses but little water and fuel as compared with steam and requires less time to get ready than either steam or electric. Power for power, it is not only less costly but lighter and is therefore better suited for bad roads and long distances. As perfected today, it runs almost as noiselessly as its steam and electric brothers and it is only in starting and stopping, or handling at extremely slow speeds that it is surpassed by them.

ADVANTAGES—The advantages of this system so far outweigh the advantages of the other systems that many believe it will eventually control the field, but so long as opinions differ there will doubtless be many who will see in the steam and electric much to prefer and these excellent systems will therefore continue to be used.

NATURE OF ROADS; MAKING A SELECTION—The nature of the road over which the vehicle is to be used should have much consideration. No mechanism is subjected to as great abuse or as wide a range of speeds and conditions as an automobile and unless it is adapted to these conditions it will surely prove unsatisfactory. If it is to be used over rough roads, in a hilly country, through sand, mud or snow, great power will be required and not only great power but ample strength in the running gear parts, that is, in the wheels, tires, springs, axles and all bearings. While these features are naturally good anywhere, they are absolutely essential in a vehicle for hard service.

AMPLE CLEARANCE—Rough roads also demand

EDITOR'S NOTE—This is the first of a series of articles by Charles E. Duryea. They will be prepared for publication in book form and will be distributed by the American Motor League to its members during the coming year.

ample clearance underneath so that one need not worry whether it will pass over rocks and similar obstacles without striking. It is certainly an unpleasant thought that a chunk of ice, a projecting man hole cover or some similar obstruction may tear off the bottom of some vital part of your mechanism. If the vehicle is to be used on good roads only, less power with consequent less cost may be sufficient but usually no one regrets having ample power and most buyers secure increased power when buying a new vehicle. A full horsepower for each 100 pounds is now largely accepted as proper.

LARGE WHEELS—For rough roads, large wheels run more easily, are less likely to tear or damage their tires, and ride more comfortably because they do not drop so deeply into the holes and because they rise over obstructions more gently. These facts apply both to the little traveled country roads and to the rough stone block streets of the city and on this account there has been a decided increase in the size of automobile wheels in the past few years. It may not be wise to favor the large sizes used on horse vehicles because of the enormously increased tire cost and because of the greater strength needed in the automobile wheel, but unquestionably for rough roads, such as 95 per cent of the American roads are, a large wheel should be favored and will be found satisfactory.

EASY SPRINGS—In the matter of springs, the motor vehicle may well take a lesson from its predecessor. The smaller wheels and higher speeds unquestionably demand longer and better springs than are necessary on a horse vehicle. It is argued that the pneumatic tire lessens the need for good springs, but as a matter of fact, it is the province of the tire to absorb the smaller vibrations due to pebbles, small rocks and similar roughnesses, while the springs absorb the larger ones. In horse vehicles the cushions and upholsterings serve to save the passengers but in the automobile this is not sufficient, for unless the mechanism the likewise protected, the destructive vibration will sooner or later cause trouble. The front wheels are pushed instead of pulled as in a horse vehicle and this makes them strike hard on rough spots particularly if small and heavily loaded. This is readily shown by pushing or pulling a wheel barrow.

STRONG AXLES—For high speeds or hard service the axles also are most important. They carry the load and must take the strain of turning corners, twisting out of ruts, striking holes or rocks at speed, crossing car tracks, skidding and similar unforeseen destructive agencies. Instances are known where a high-priced touring car required its third-set of axles, each heavier than the first before it was in condition to be driven safely over American roads better than the average. The bearings, too, like the axles, receive much abuse and in addition to the hard work are exposed to destructive mud and dust should not be neglected.

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THIS LEAGUE

Is Now Collecting Route Information

covering all automobile routes in the important states and will publish road books for motor car users as fast as complete information is received. The A. M. L. is the only organization engaged in this work, and it invites the co-operation of all persons interested. For full information and membership blanks address American Motor League, Vanderbilt Building, New York City.

MORE DANGER SIGNS

Senior Consul Paul C. Wolff, of the Pittsburgh board of consuls, has received from headquarters a set of stencils for use in making official danger signs, of which a number will be put up by the Pittsburgh consulate to warn tourists of various danger points in western Pennsylvania. The secretary will send out any number of these stencils to clubs or to persons who will volunteer in behalf of the league to put up danger signs where needed. That danger signs are needed in many places is a fact again made prominent by the experience of the Glidden tourists who made the New England circuit last week. The roads selected were presumably the best between the various towns covered; but the roads were bad nevertheless, and in many places dangerous. Cars were overturned, were ditched, and were bumped into rock walls, stone fences and bridge abutments. High speed was maintained around sharp turns and in all sorts of unfamiliar situations. Arrests were made, cars detained, tourists fined and in many ways the continuity of the procession interfered with. The searcher must always be reckoned with. He is an inevitable part of the motor car problem. As a member of the league he is entitled to the paternal care of the organization, but, as a law breaker the league cannot insure him against arrest and punishment. It seeks therefore to do the next best thing, and in putting up these danger signs many a broken car and often a broken neck will be saved or prevented. The league sends out a printed circular and tells its friends and members how the danger signs may be made and put up in a substantial way at small cost. It supplies stencils from which the inscription can be made and thus goes far to simplify and encourage this important work.

NEW YORK COMMITTEE

The following named members have consented to act as a committee of the league in preparing the new road map covering territory around the city of New York and contiguous territory in the State of New Jersey: Colonel W. C. Weir, New York; Dr. Jules E. Serre, New York; Fred J. Titus, New York; Edward D. Page, New York; William H. Holdworth, New York; Charles A. Carlson, New York; N. Cornelius von Erden Mitchell, New York; E. J. Neighbour, German Valley, N. J.; M. S. Neighbour, Hackettstown; Charles L. Edwards, Long Branch, N. J.; N. H. Kilmer, Ocean Grove, N. J.; George A.

Post, Paterson, N. J.; J. G. Greene, Elizabeth, N. J.; Ernest D. Mulford, Elizabeth, N. J.; S. W. Rushmore, Plainfield, N. J.; George C. John, Lambertville, N. J.; L. A. Voorhees, New Brunswick, N. J.; Louis C. Van Riper, New York, N. Y.

REGISTER AGAINST THEFT

Another valuable automobile was stolen a few weeks ago. It was a \$10,000 machine and was taken from the public garage at 310 West Fifty-ninth street, New York, in broad daylight on July 5. Fortunately the machine fell into the hands of unskillful thieves, and it was found later about 3 miles from the garage where it had broken down and been left by the culprits who took it. Meanwhile, a small host of detectives went scurrying over northern New York and into Westchester county, and even into Connecticut. Several arrests were finally made but evidence was lacking, and up to this time no conviction has been effected. On July 7 two detectives called upon the secretary to inquire whether the league would pay \$100 for the conviction of the thieves who stole this machine. They were informed that the league would pay nothing in this case, for the reasons that the machine was not registered, the machine did not carry the A. M. L. protection disk, and the owner of the machine was not a league member. When a registered motor car belonging to an A. M. L. member is stolen, the reward will be instantly and widely announced and every effort made to recover the machine, and hunt down the culprit. The league is regis-

tering machines of its members from day to day and issuing protection disks to all who apply. A printed circular giving full particulars for obtaining these disks and registering machines will be sent to any reader upon receipt of request.

TRIBUTE TO THE LEAGUE

The following letter has been received at headquarters from the state of Connecticut highway commissioner's office, at Hartford, July 17:

"I am in receipt of advanced sheets of the southeastern New York and Connecticut road book for the A. M. L. From my personal knowledge of the state of Connecticut, and it is not limited—I mean the knowledge, and it state—having been state highway commissioner for the past 10 years, and having been in my official work, over every mile in the main highways of the state, I feel frank to say without fear of contradiction, that the maps sent me are as near being absolutely correct as it is possible to have them. To sum up in one sentence, my opinion is they are a safe guide for any traveler over the roads of Connecticut, either on foot or awheel. —James H. MacDonald."

The new road book for southeastern New York and Connecticut will be put into the bindery within a few days and will be distributed exclusively among A. M. L. members.

APPOINTMENT OF CONSULS

The following named members have been appointed local consuls: Fred A. Trowbridge, Morristown, N. J.; Elmer A. Knox, Brooklyn; P. R. Tarrant, Brooklyn; Martin Seeley, Manhattan, New York; Ralph Tiffany, Philadelphia, Pa.; Roger Trebe, Dover, Del.; S. S. Varden, Washington.

LEAGUE MEMBERSHIP

The league invites to its ranks all motor car users of good character and all who favor the use and development of the new vehicle. Its officers believe that the motor car users of this country should all unite into one strong, aggressive, influential body for offensive and defensive purposes. They believe in encouraging the safe and sane use of power vehicles and that these vehicles should be used in a manner consistent with the rights of all other persons who have an equal place upon the public roads. The secretary will send to any reader, printed matter describing the league and its objects. No initiation fee. Annual dues \$2. Address American Motor League, Vanderbilt building, New York.



WINTON



USING HIS FOURTH WINTON

Mr. Robert Allison, M. E., of Port Carbon, Pa., member of the American Society of Mechanical Engineers, has used Winton cars *continuously since 1898*.

1—In March, 1898, Mr. Allison bought the *first* Winton phaeton placed on the market. This car was used until

2—April, 1901, when it was re-purchased for exhibition by the Winton Company, Mr. Allison buying a second phaeton, which is still giving good daily service in its fifth year.

3—In June, 1903, Mr. Allison purchased a two-cylinder Winton, continuing its use until

4—June, 1905, when he purchased a four-cylinder Winton Model B, selling the two-cylinder car in Reading, Pa., where it is still giving satisfactory service in its third year.

Mr. Allison bought the first Winton because he wanted a car right away and the Winton was the *only* American car then on the market.

But he bought three other Wintons when he could have selected other makes. Evidently he considered the Winton *best*.

Note that Mr. Allison is a professional engineer—a skilled critic of automobiles, able to know a car's value at sight.

Observe that his old cars are right now in daily service, excepting only the old original Winton which we bought for exhibition purposes.

Speaks for Right Construction, Stability and Safe Investment, doesn't it?

Now, let's see what Mr. Allison says about his 1905 Winton:

"My Winton Model B is simply grand and grandly simple. We are in a very hilly section of Pennsylvania, but this makes no difference to the car, as we go up and down, and on the level, at the same speed, with a load of five people; in fact, I am astonished at the power and speed the car develops. This is the only B car in this section, and it attracts more attention and admiration than any other car here. I have given rides to a number of friends, and all are delighted with the car and cannot say too much in its praise."

Five Models—16-20 to 40-50 h. p.—\$1,800 to \$4,500.

CATALOG No. 2 DESCRIBES ALL MODELS IN DETAIL

THE WINTON MOTOR CARRIAGE CO.
CLEVELAND, Member A. L. A. M. **OHIO, U. S. A.**

Branch Houses in Chicago, New York, Philadelphia, Boston and London

Sales Agencies Everywhere

"The Aristocrat of Auto Cars"



Holder of Four World Records

- 1 Mile Track Record (Gasoline)**
52 1-5 seconds, made by Chevrolet in Major Miller's "FIAT" at Morris Park.
- 2 World's Middle Weight Record**
55 4-5 seconds, made by E. Parker, at Morris Park, July 4th.
- 3 World's Long Distance Road Record**
260 miles, made by Lancia at Brescia. Average speed 72 1-5 miles per hour.
- 4 Motor Boat Race Across the Mediterranean (200 miles)**
Won by "FIAT X" in 12 hours, beat nearest competitor 4 hours, 50 seconds.

HOLLANDER & TANGEMAN
3 and 5 West 45th St., N. Y.

SOLE AMERICAN AGENTS Licensed Importers Under Selden Patent

"The Aristocrat of Auto Cars"

Susquehanna Silk Mills.

62 Greene St.

H. SCHNIEWIND, SR. Pres.
H. SCHNIEWIND, JR. Treas.
MAX SIEPERMANN, Secy.

MSH

New York, June 26th, 1905.

The Continental Caoutchouc Co.,

43 Warren St., New York City.

Gentlemen:

By express prepaid I am returning to you to-day one of your shoes bought last year, and it affords me pleasure to give you the history of this shoe.

I put it on my heavy Winton 1904 Touring Car on June 28th, 1904. It was taken off on Dec. 1st, of the same year, as I laid off my car. It was put on again on April 30th, 1905, and I had it taken off to-day, not because I had a puncture or any other trouble, but because I think this shoe has done its duty.

In this time of seven months of continuous service, I have not had one puncture or any other trouble with this shoe, or inner tube, and it has not been touched.

My car makes between 1500 to 2000 miles a month, so that the mileage of this tire is between 10,500 and 14,000 miles. How much longer it would have lasted I cannot judge, but in order to avoid possible delay on the road, I prefer to put on a new outfit.

I hardly think this record of wearing can be beaten by any other tire, and I surely would not have any other but your make on my car.

Very truly yours,

Max Siepermann

Could YOU wish for anything more with your tires?

CONTINENTAL TIRES will serve you equally well. Send for our booklet.

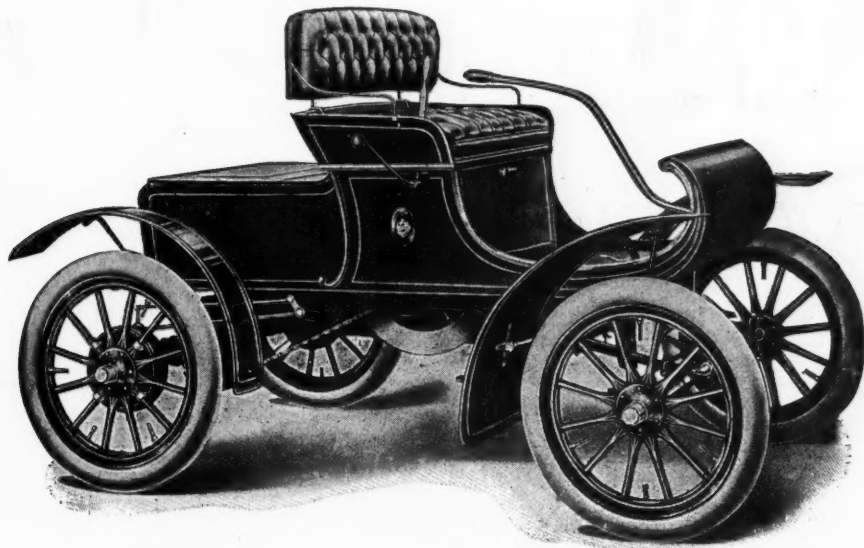
Address Dept. M. A., THE CONTINENTAL CAOUTCHOUC CO.

Factory, Hanover, Germany

43 Warren St., New York

EMIL GROSSMAN, Gen. Mgr.

OLDSMOBILE



Standard Runabout, Price \$650

AN OFFICE ON WHEELS

The traveling man, the business man, the professional man, has each demonstrated in his own way the value of the Oldsmobile Standard Runabout as a practical every-day business partner.

John A. Hach, Jr., traveling salesman for the Tappan shoe, last season covered a total of 5,562 miles through southern Michigan and northern Ohio, at an average expense of \$1.50 per week for fuel. He closed his season three weeks ahead of his usual schedule. He says: "It has proved to be all that is claimed for it. I consider it the safest and simplest for traveling, and my opinion is based on experience."

This is but one instance out of hundreds. What it has done for others it can do for you, and it is a very simple matter for you to investigate. A detailed account of Mr. Hach's trip will be sent on request.

You can easily arrange with our nearest sales agent for a demonstration of this or any of our line of cars. Send for catalog 52.



Olds Motor Works, Detroit, Mich., U.S.A.

MEMBER A. L. A. M.



GOOD YEAR

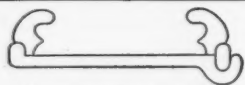
Detachable Auto Tire and Universal Rim

New Goodyear Universal Rim

A practical solution of the tire problem.

These Rims involve no extra cost to you. They are adapted to our New Goodyear Detachable Auto Tire, as well as to all other Goodyear auto tires, or **ANY** standard clincher tire made. Change from one make of tire to another instantly without tools.

With Universal Rims you may remove tire, exchange inner tubes and replace tire inside of two minutes, with no effort—no tools whatever, just “fingers and thumbs.” We have repeatedly demonstrated that a small child can do it with ease. Tubes can be patched over and over again indefinitely, as the rim cannot injure them. This means economy in your tire bill.



UNIVERSAL RIM.

With removable flange rings arranged for any standard clincher make of tire.

There is no stretching or prying of tire with the Universal Rim, because the side flange rings which hold tire are easily slipped off, leaving a flat, smooth surface over which tire slides easily. This does away with the hard work and hours of wasted time required to detach and apply tires with any other rim. This is the most positive fastening device made. Tire held securely, although deflated, without injury—yet there are no bolts nor nuts of any kind other than the valve fastening.

You will not be confined to the use of any one make of tires when your wheels are equipped with Universal Rims. These rims fit any ordinary auto wheel. With all other mechanical



DONE IN A MINUTE

No bolts, no nuts, no stretching, no tools—only the hands.

The New Goodyear Universal Rim consists of a single flat steel band, rolled to shape and adapted to fit any wheel with a wood felloe carrying standard clincher tires; two removable (endless) steel flange rings, adapted in contour on one side to engage the ordinary clincher type of tire and on the reverse side for our Improved Goodyear Detachable Tire; and an open steel locking ring which locks the flanges in position; the whole rendered rust-proof by thorough galvanization.

fastenings the tire maker secures a claim on your pocketbook. In this respect Goodyear Tires must stand on their merits, as they can be replaced with others at any time without change in wheels.

Write for the “Good News Book.” This book sets forth information that every car owner ought to have, no matter what kind of tires he uses. If you are tired of tire trouble, write for the book. Garage owners and dealers need it, too. Mailed free.

New Goodyear Detachable Tire

on New Goodyear Universal Rim provides the perfect auto tire combination.

Liveliest tire ever produced, because built with a foundation of pure Para rubber, united with parallel threads—not hard woven fabric.

This tire construction is possible only with our improved wrapped tread construction, by which we make tire in two parts, each part treated according to the qualities demanded of it. Thus we have a foundation of ideal resilience that gives and takes under the shocks of the road—and an outer tread or wearing surface of toughest composition.

The most disastrous forms of tire trouble, such as creeping and tube pinching, are absolutely impossible with this tire on the Universal Rim. We absolutely guarantee that it will not rim-cut.



UNIVERSAL RIM.

With removable flange rings arranged for Goodyear Detachable Tire.

Positive fastening of this tire is due to the Goodyear contractible tapes of steel wire woven in the base and completely encircling the tire. These tapes are shortened by inflation and grip the rim with a tremendous force. This contractible tape fastening has been used in Goodyear Detachable Tires for the past six years and has stood every test.

There is more luxury in the Goodyear Detachable Auto Tire than in any other tire now produced—with positive freedom from tire trouble due to combination with Universal Rim.

This combination costs more to produce, but is sold at the price of ordinary tire equipment.

The Goodyear Tire & Rubber Co.

Wallace Street, Akron, Ohio

BRANCHES

NEW YORK: 253 W. 47TH ST.
CINCINNATI: 242 E. 5TH ST.
BOSTON: 6-8 MERRIMAC ST.
CHICAGO: 110 LAKE ST.
MINNEAPOLIS: 116 S. 6TH ST.

DETROIT: 242 JEFFERSON AVE.
ST. LOUIS: 1219 N. BROADWAY.
LOS ANGELES: 932 S. MAIN ST.
CLEVELAND: 69 FRANKFORT ST.
BUFFALO: 670 MAIN ST.

KANSAS CITY: 1612 GRAND AVE.
PHILADELPHIA: 1521 SPRING ST.
OMAHA: 1516 CAPITOL AVE.
SYRACUSE: 416 S. SALINA ST.
DENVER: 220 SIXTEENTH ST.

Don't experiment- Just buy a FORD



In addition to Henry Ford's originality of design there is more actual value of material and workmanship in FORD MODEL "F" than in any other automobile ever built at the price.

It seats five people, climbs hills on high speed, has a roomy side entrance tonneau, is light, strong and rides like a Yacht. Has the latitude of speed on the high gear of a \$5,000.00 car. Do not be deceived by "Horse Power TALK." Make it your business to see what THIS car will DO.

Get a Ford *demonstration* of Power in comparison with other cars and see the difference between *real* or *actual* power and *rated* power. Write for booklet on *Maintenance* giving facts as to the low cost of operating Ford cars.

The Doctors Car \$850
Model "C" \$950

Model "F" \$1200
Model "B" \$2000

Ford Motor Company,

Detroit, Mich.

Members American Motor Car Manufacturers Association.
Canadian Trade Supplied by The Ford Motor Co., of Canada, Ltd., Walkerville, Ont.

THIS PICTURE

tells a story that you cannot get away from.

¶ It is taken from life on a mud road leading past the factory where

MITCHELL

cars are made, and explains why the Mitchell is "the car you ought to have at the price you ought to pay."

TWO MODELS

Touring Car:
18-20 H. P.
4-Cylinder
vertical
\$1500

Runabout:
9 H. P.
2-Cylinder
\$750



We want you to investigate and if we can't convince you by examination and demonstration, we won't try to by argument.

¶ All Mitchell cars are tested over this road before being made ready for shipment.

¶ If they "make good" in this kind of going, they will "make good" anywhere on earth.

¶ Send for our catalogue of "Common Horseless Sense."

MITCHELL

MOTOR CAR COMPANY
RACINE, WIS.

Members American Motor Car Manufacturers' Association, Chicago.

¶ A 4-cylinder, 5-passenger car with $3\frac{7}{8} \times 4\frac{1}{2}$ cylinders, developing 20 to 22 h. p., and weighing a bona fide 1650 pounds.

¶ A car getting eighteen to twenty (90 to 95 per cent) of its horse power actually delivered to the rear wheels.

¶ A car that with four 185 lb. passengers aboard, carries only 57 per cent of its total weight on the rear tires.

¶ A car having its mechanism so arranged that the severest racking of the roughest roads cannot affect a single part.

¶ A car in which the entire power plant can be removed for repairs in an hour, without disturbing body or dash.

¶ The STEVENS-DURYEA is this sort of a car; its "Unit Power Plant" and "Three Point" support make this combination possible—a combination that no other maker in the world has been able to secure in a touring car.

¶ The Three Point Suspension and General Construction of the Stevens-Duryea were patented April 4, 1905, No. 786,349.

J. STEVENS ARMS & TOOL CO.

Makers of the "Twentieth Century Hustler"

705 Main St., Chicopee Falls, Mass.

Member Association Licensed Automobile Manufacturers.

The Coil That Does the Trick

In the
Climb to
the Clouds

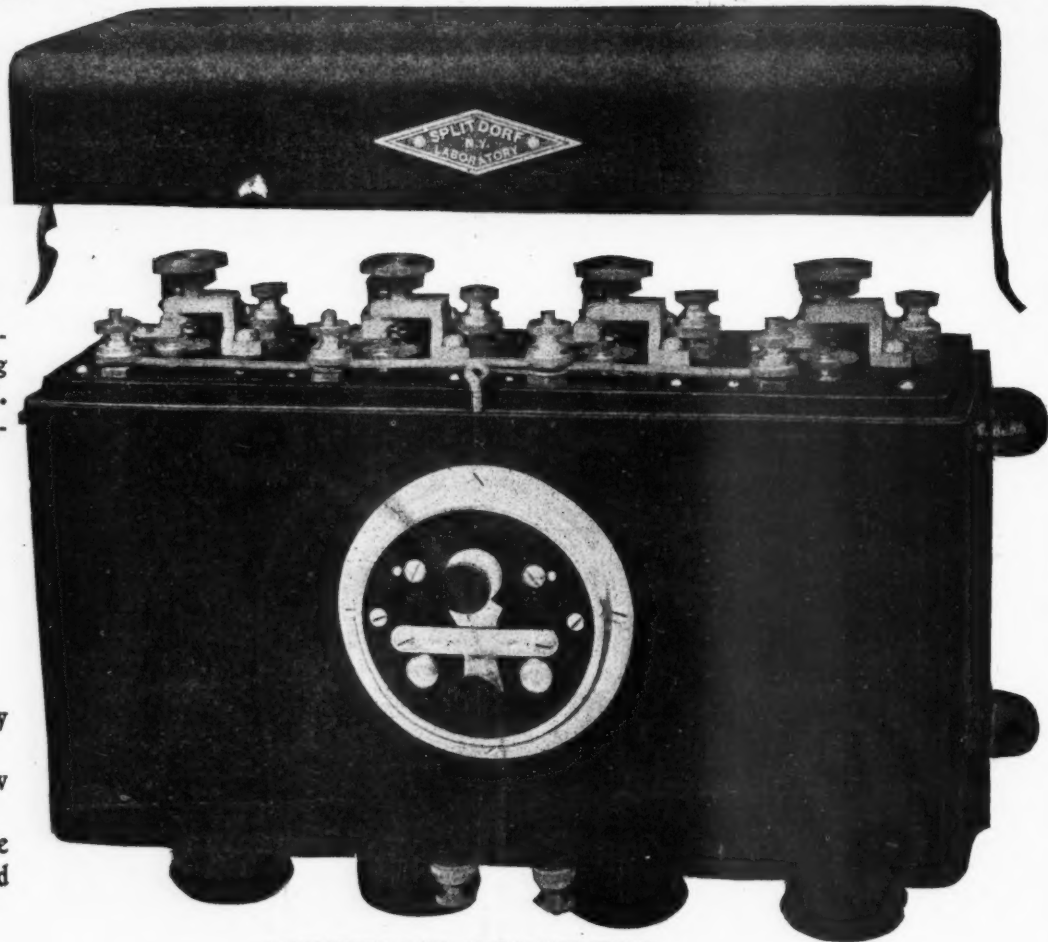
Chas. Soules, driving a Pope-Toledo fully equipped Touring Car made the ascent in 29:37 2-5. This is considered a most wonderful performance. Besides

SPLITDORF COILS

were winners in nearly every event.

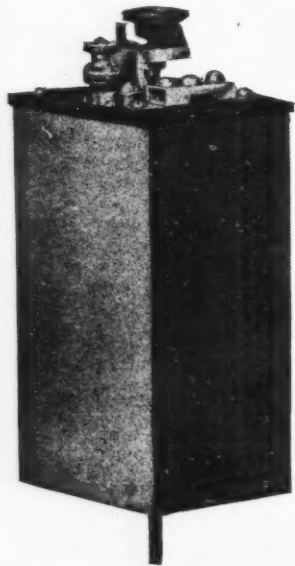
Ask the Glidden Tourists how they like the Splitdorf Coil.

Seventy-five per cent of the cars on the tour were equipped with them.



4 CYLINDER COIL, SEPARATE UNITS.

HERE IS DR. PARKER'S LETTER:



UNIT.

Note the ratchet adjustment.

Mr. C. F. SPLITDORF,

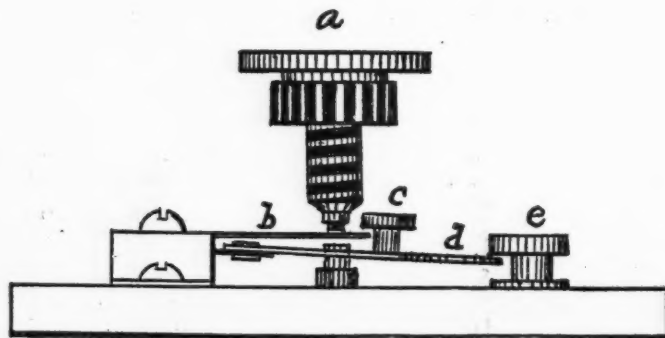
June 24th, 1905.

Dear Sir: I feel that in the recent 200 mile contest my success, in a large degree, was due to your coil. It seems to me that your latest is superior to anything in use to date. I tell my automobile friends to give me a SPLITDORF for reliability every time.

Very truly,

167 Remsen St., Brooklyn, N. Y.

C. B. PARKER.



Winner of recent
Economy Test of
Long Island Auto-
mobile Club.

C. F. SPLITDORF, 17-27 Vandewater St., NEW YORK

The Largest and Most Successful Coil Maker in the World.



THE EXACT FIGURES

9½ gallons of gasoline, costing	\$2.44
Less than a gallon of lubricating oil . . . . .	.53
Tire repairs . . . . .	.25
Total cost of round trip	\$3.22

4 P a s s e n g e r s
190 - Miles - \$3.22
80½ cents per passenger

That is the record of the 1,275 pound, \$1,700 touring-car that won the Long Island Club's trophy in the 2 days "Economy Tour" from Brooklyn to Southampton, L. I., and return. The car was a

FRANKLIN

What it Means

These figures mean a good deal more than appears on their face.

They not only prove conclusively that *Franklin* Cars represent the very acme of operating economy in fuel, oil and repairs; but they indicate the still more remarkable *Franklin Economy of tires*.

The car which came nearest to the *Franklin* operating cost on this tour sells at \$3,500 and weighs 2,400 pounds, which means at least twice the wear and tear on tires. This may not show in two days; but it soon gets into the expense account.

If you could figure out accurately all the elements involved in this contest, you'd find that *Franklin* cars are not only the ablest in proportion to their cost, but the safest, most comfortable and most economical of all cars at any price.

Reasons

Franklin engineering and construction; light weight; 4 cylinders Franklin air-cooling

Type E: Gentlemen's Roadster: 2-Passenger, 12 h. p., 4-cylinder air-cooled engine. Weight, 1,050 lbs., ironed for canopy top. Speed, 40 miles an hour. Price, \$1,400.

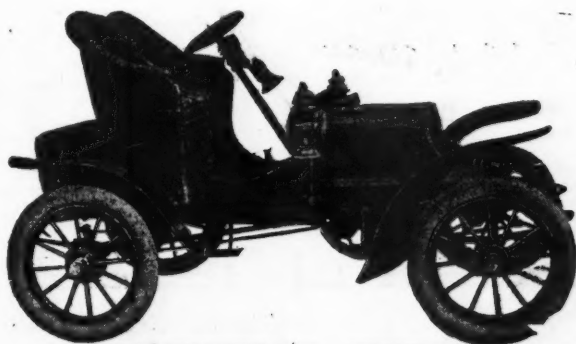
And this little type E car is the one which L. L. Whitman has just driven from Los Angeles to San Francisco [500 miles over hilly roads] in 37 hours, 54 minutes; cutting the best previous record down 15 hours.

Six Models for 1905

Gentlemen's Roadster or Runabout. Light Touring-cars.
High-power Touring-cars. Come and see what they do.

H. H. FRANKLIN MFG. CO.
Syracuse, N. Y.

Member Association Licensed Automobile Manufacturers.



Classification Distinctive... WHY?

The Lightest, the Strongest, Most Durable, Most Efficient, Best Finished. Attractive in Rich Finish and Design, Simply Manipulated.



Absolutely Safe, Perfectly Clean, Best to Ride, Most Economical to Keep. Always Satisfactory. A Carriage Any Lady Can Drive.

THE BAKER ELECTRIC

SEND FOR OUR BK CATALOG

THE BAKER MOTOR VEHICLE CO. Cleveland, Ohio

Chicago Agents: PARDEE-ULLMANN CO., 1218-20 Michigan Avenue, Chicago

Compound MOTOR CARS

Mr. Herreshoff, the blind designer of America's cup defenders in his Compound light touring car.



Model 4, 12-15 H.P.

(DUPLICATE OF CUT)

\$1400.00

The E. H. V. Co., - Middletown, Conn.

CADILLAC ECONOMY

Here is a statement which our Madras, India, representatives recently sent us, which for minimum cost of operating beats any we have ever seen:

CADILLAC MODEL A, 9 h. p.

Distance run, 70 miles exactly.
 Average speed, 18.29 miles per hour.
 Petrol used, 2.262 gallons.
 Petrol, miles per gallon, 30.9.
 Lubricating oil used, .15 gallon.
 Total cost of run, Rs. 2/8/6=81 cents.
 Total cost per mile, say pies, -/-/7=1.2 cents.
 Total cost h. p. mile, say pies, -/-/1=0.14 cents.
 Weight of car, 1,400 lbs.
 Weight of passengers, etc., carried, 748 lbs.

We do not *claim* an average of over 20 miles per gallon of gasoline over the average road in the hands of the average operator. Mr. Deveau, of Toledo, recently drove a Model F, with two passengers, 280 miles (*without stopping the motor*) on two tanks of gasoline, about 13 gallons, at an average speed of 23 miles per hour, including stops.

We believe the Cadillac single cylinder will give the average owner more mileage for money invested than any car built, regardless of price or horse power.

CADILLAC AUTOMOBILE COMPANY

Members of Association of Licensed Automobile Manufacturers

DETROIT, - MICH.

The Powerful DOLSON

The Strongest Car in
America at the Price

\$1350

COMPLETELY EQUIPPED
AND READY FOR
EXTENDED TOURING

ALL KINDS OF TALKING POINTS AND REAL MERIT



The DOLSON is the strongest, most powerful car in America for its price. It is a hill climber par excellence, has plenty of speed, easy of control, beautifully designed, handsomely finished and upholstered. Wheel base, 90 inches. Wheels, 30 inches. Tires, 3½ inches front, 4 inches rear. Large, roomy tonneau, seating five persons comfortably.

In design, material, workmanship and specifications, the **DOLSON** compares favorably with high-priced cars, and it is listed at a price that enables agents to sell quickly and duplicate orders. We can and will make deliveries as specified.

Don't wait too long. Get in line now.
Write for further particulars.

1905 MODEL C. Price, \$1350.00

Including two oil side lamps, acetylene head light, French horn, mats, full tool equipment, ready for extended touring.

JOHN L. DOLSON & SONS, : : Charlotte, Michigan

A Goodrich Tire Promise is always kept

We said the 1905 Goodrich Clinchers—Integral Construction—were the most powerfully constructed tires in the world, and this assertion was made only after a long series of comparative tests with all the leading makes of tires by an accurate practical machine especially constructed for the purpose.

Since then thousands of 1905 Clinchers have been tested out under every condition of road service with the general verdict that Goodrich Tires represent the biggest step yet made towards producing

A Perfect Tire

Road tests have proved factory claims

The Bailey "Won't Slip" Tire, regular Goodrich construction, but provided with the Bailey "Won't Slip" Tread, prevents slipping, slewing or skidding.

THE B. F. GOODRICH CO., Akron, Ohio

New York, 66-68 Reade St. and 1625 Broadway.
Philadelphia, 909 Arch St.
Buffalo, 731 Main St.
Cleveland, 420 Superior St.
Boston, 161 Columbus Ave.

Detroit, 80 E. Congress St.
Chicago, 141 Lake St.
San Francisco, 392 Mission St.
Denver, 1444 Curtis St.
London, E. C., 7 Snow Hill.



Rims branded in the channel with this copy-right mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

Another Victory

Added to the long list verifying the merits of G & J Tires.

A Stanley car, equipped with regular **G & J TIRES**, made the best American record at Mt. Washington, N. H., in the famous "Climb to the Clouds," winning in light and middleweight classes.

TIME: 22 Min. 17 3-5 Sec.

G & J TIRE CO.

INDIANAPOLIS

Boston

Chicago

Buffalo

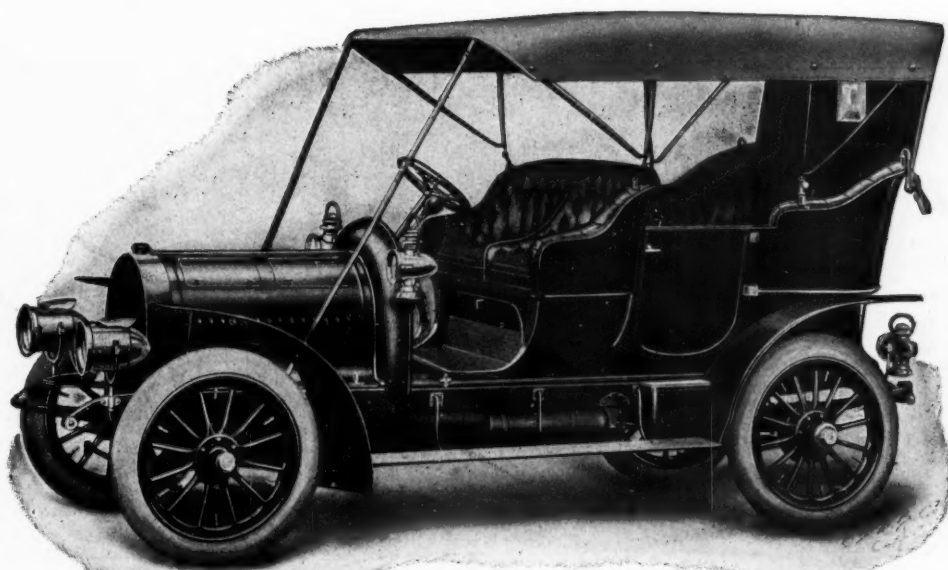
Denver

Cleveland

San Francisco

Detroit

First Among the Best



A ROYAL TOURIST---Those who know it best, know it is the BEST

Write for Nearest Agency

THE ROYAL MOTOR CAR CO. Department 2
CLEVELAND, OHIO

\$1000—QUEEN MODEL E—\$1000

18 actual horse power. Two Opposed cylinders. 1,600 lbs.

3 to 40 miles per hour. Seats five people.

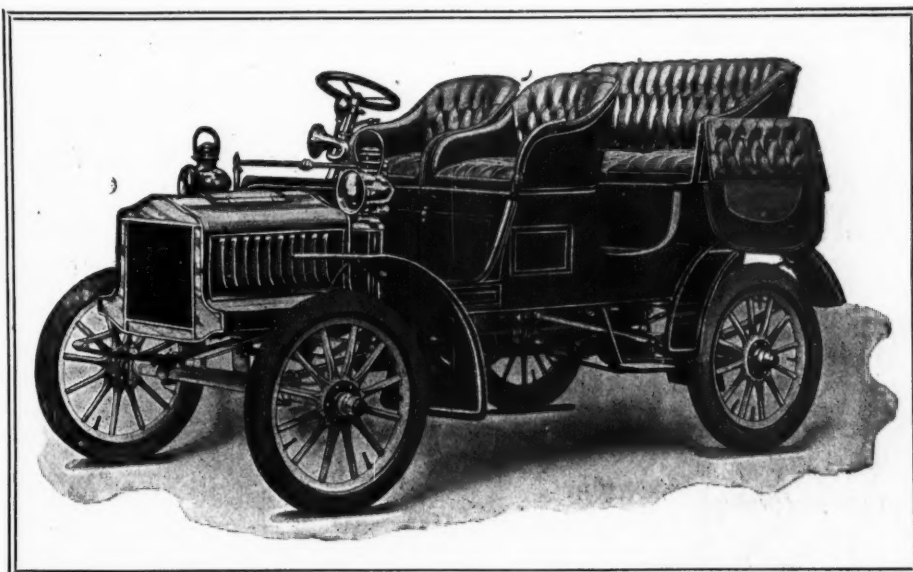
Double side door entrance. All speeds on one lever.

Finished in royal blue, with cream colored gear.

Equipped with two lamps and horn.

Price, complete, \$1,000. Can guarantee prompt deliveries.

Manufactured by



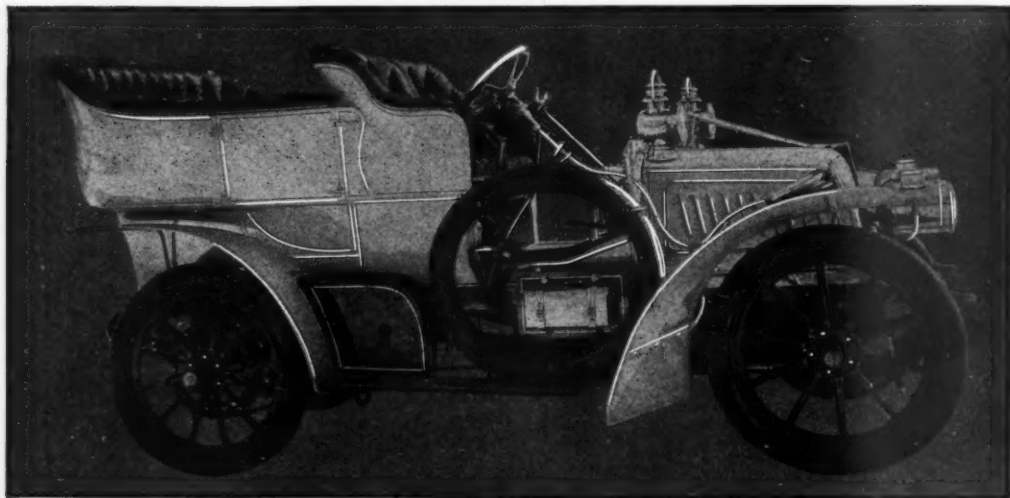
THE C. H. BLOMSTROM MOTOR CO.

1284 River St., DETROIT, MICH.

NEW YORK AGENT: C. A. Duerr & Co., Cor 58th St. and Broadway. CHICAGO AGENT: Harry Branstetter, 1466 Michigan Ave.
BOSTON AGENT: F. E. Wing Motor Car Co., 66 Stanhope St. PHILADELPHIA AGENT: The Motor Shop, 317-319 North Broad St.
DENVER AGENT: Mathewson Automobile Co., 1420-1422 Court Pl.

WORTHINGTON AUTOMOBILE COMPANY

547 Fifth Avenue New York City



24 h. p. Berg Touring Car

IMMEDIATE DELIVERY

MEMBERS A. L. A. M.

PENNSYLVANIA CLINCHER

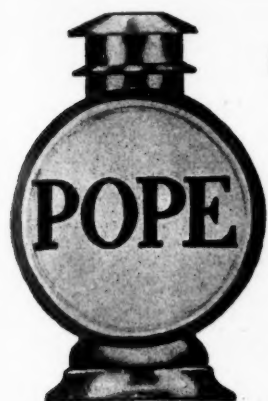
The value of a Tire is measured not by dollars,
but by the Odometer.

The Tire which travels furthest without repairs is
the most valuable to YOU.

The Tire which carries your Car softly over the
road is the most valuable to your MOTOR.

PENNSYLVANIA RUBBER CO.

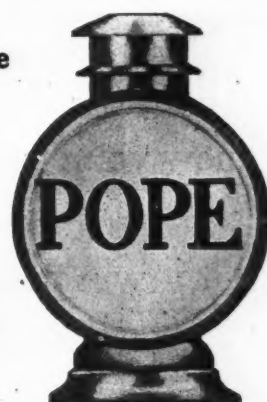
JEANNETTE, PA.



Be Sure the Name **"POPE"** is On Your Automobile

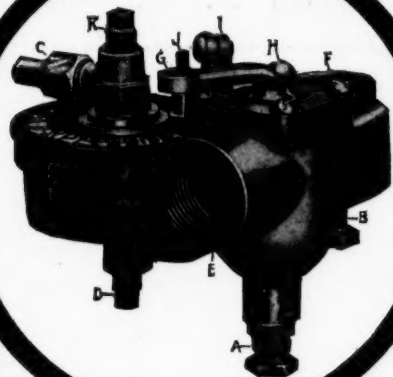
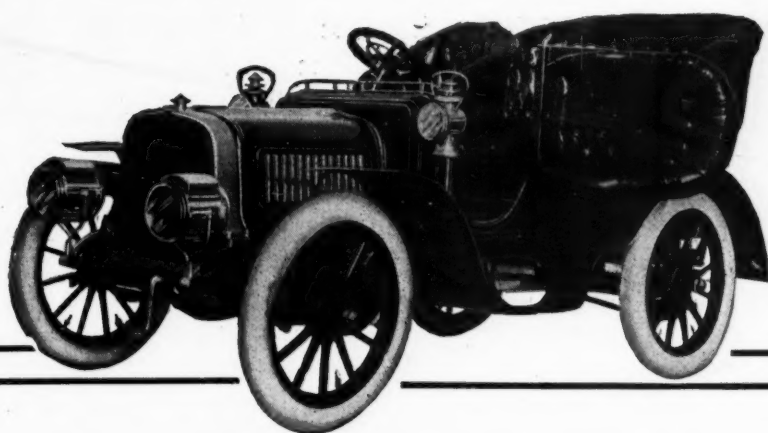
POPE-TOLEDO, TYPE VII, \$3200

Our new front-entrance model offers many advantages not possible with side-entrance bodies; removable tonneau; shorter wheel base affording more power at the wheels; wider entrance, less step from curb to car. Thirty h. p. engine. Every one tested to do a mile a minute. It was with a Type VII that E. H. R. Green established the world's track record for stock cars.



We Can Deliver a Limited Number of These Immediately

POPE MOTOR CO., Toledo, Ohio



KINGSTON

1906 TYPE-K-AUTOMATIC CARBURETOR

EASY TO UNDERSTAND EASY TO OPERATE

Fuel controlled entirely by equalizing automatic air valves.

Will increase **POWER** and **CONTROL** of any 1905 FORD or OLDS car, or money back.

Positively will not accumulate fuel in, or **CLOG LONG INLET PIPES**.

Perfectly adapted to gasoline cars, boats, airships and motors for any kind of service.

Built for business by the oldest manufacturers in the business.

OVER 29,000 KINGSTON CARBURETORS IN USE

KINGSTON MUFFLER



**IMPROVED
FOR 1906**

BYRNE, KINGSTON & CO.,

KOKOMO, INDIANA, U. S. A.

DON'T DREAM

About possible buyers for big touring cars. Get busy. Dig for the people you know you can interest in a Sturdy Northern Runabout at \$650.

Next year you can sell them a touring car---a Silent Northern, of course, but it will pay you to sell them a Sturdy Northern Runabout this year. It is planting good seed. You will be sure of a crop of touring car orders next year.

The Sturdy Northern is the best constructed and quietest running car of its class. Planetary transmission; seven horse-power, single cylinder engine; starts from the seat, and safety device prevents back kick. Two speeds forward and reverse; single lever control; treadle applied brakes; improved carbureter; full back molded seats, and that exclusive, original improvement, the Northern Trunion Body Hanger, which eliminates vibration, and insures comfort over all roads. There are many other improvements which can best be noted in the machine itself. Let us send you a copy of Catalog. Write for terms to agents. Get busy. Do it today.

2-Passenger Touring Car, 18 h. p. \$1500	::	::	5-Passenger Rear Entrance, \$1600
Sturdy Northern Runabout, \$650	::	::	5-Passenger Side Entrance, \$1700

Northern

Manufacturing Co.

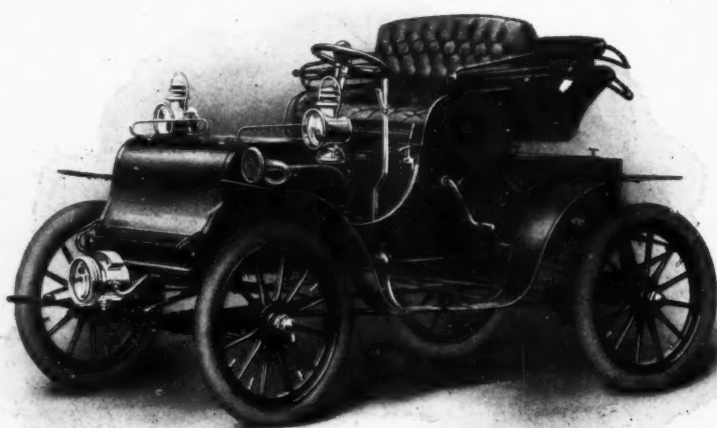
DETROIT, U. S. A.

Member A. L. A. M.

New York City Agent, Peter Fogarty, 142 West 38th Street

THE HANDY HAYNES

MODEL L



\$1,350

For business or pleasure in the city or in the country; day or night; good weather or bad weather; a winner of road records and an efficient hill-climber. A two-passenger touring car with folding emergency seat in front for two extra passengers. For full particulars send for catalogue.

The HAYNES-Apperson Co., Kokomo, Ind.

Pioneer Builders of Gasoline Cars in America. Member A. L. A. M.

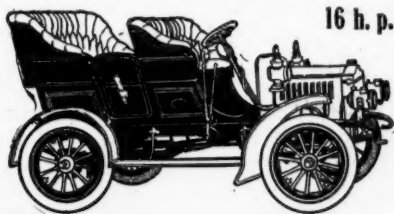
New York: 1715 Broadway

Chicago: 1420 Michigan Avenue

"The Maxwell"

Low Cost of Up Keep

The car that keeps repair bills down, not only makes new friends but keeps the old ones. The owner of a Maxwell does not have to live near a repair shop in order to get any use of his car; nor is he constantly confronted with the possibility of a long walk home. He has an automobile that he can absolutely rely on. The longer he has it the more he realizes that fact and the more he talks about it to his friends. Right there is the basis of the Maxwell popularity.

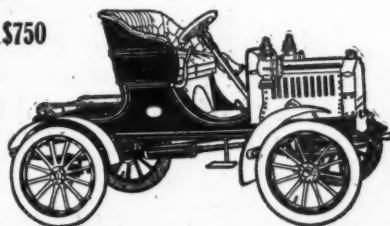


16 h. p. Touring Car, \$1400

8 h. p. Tourabout, \$750

The "Maxwell" cars have no pump (thermo-siphon). Their double opposed motor is in front under the hood and easily accessible in every part. They have Bevel Gear Drive. Metal Bodies. Transmission Case and Crank Case cast in one Aluminum casting.

"Perfectly simple and simply perfect."



Maxwell-Briscoe Motor Co.

Member American Motor Car Manufacturers' Association,
TARRYTOWN, N. Y.

New York City Salesroom, 317-319 W. 59th St.

Chicago Distributors: Western Automobile Co., 1409 Michigan Avenue, Chicago, Ill.

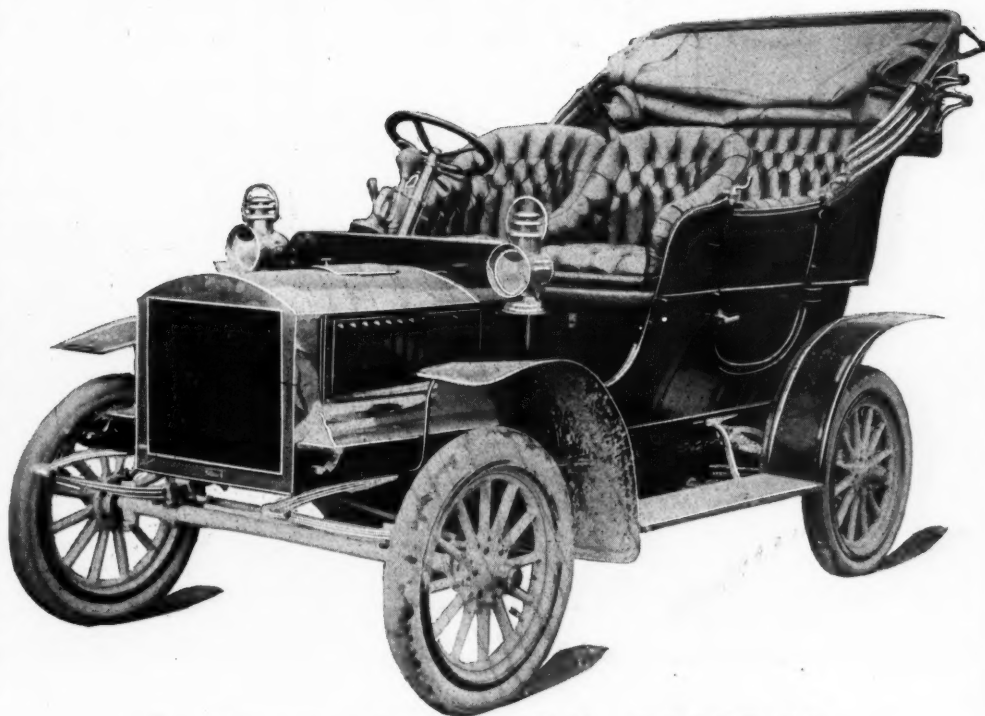
Eastern New England Distributors: Randliff Motor Car Co., Boston, Mass.

This is the car that took second in the great Non-Stop Endurance Run from Chicago to St. Paul, only stopping the engine once, and then from no motor trouble, but to repair a front spring. The only car finishing ahead of the Jackson was a \$4000.00 car.

After going through this severe test, the same car won the cup in the five-mile handicap for cars that had taken part in the tour. Every car in the race sells for more money than the Jackson.

Why did the Jackson make such a record in the non-stop tour? Why did the Jackson win the cup?

Because good, honest material and workmanship counts in a test like this. Quality always shows up when the test is applied. Write for catalogue.



Jackson Model "C." \$1250.00

JACKSON AUTOMOBILE CO.

JACKSON, MICH.

SEARCHLIGHT SWINDLERS



The success of the Rushmore Lens Mirror Searchlight has been so complete that as a matter of course the lantern makers have been compelled to either try to imitate it or go out of business.

A number of them have conspired to keep us out of the automobile shows, have claimed that we do not make the celebrated Rushmore Lens Mirror and that they get their cheap flat lenses from the same place, and have resorted to every contemptible trick to deceive people into buying their trash.

Certain so-called jobbers have tried to push the sale of the imitation lights by issuing lists of what are insinuated to be our prices in comparison with their alleged cheap prices. The statement that we ask the prices quoted is a deliberate and malicious

lie. The prices they offer are but a few cents lower than ours, while the fake lights they offer are by comparison not worth their weight as junk.

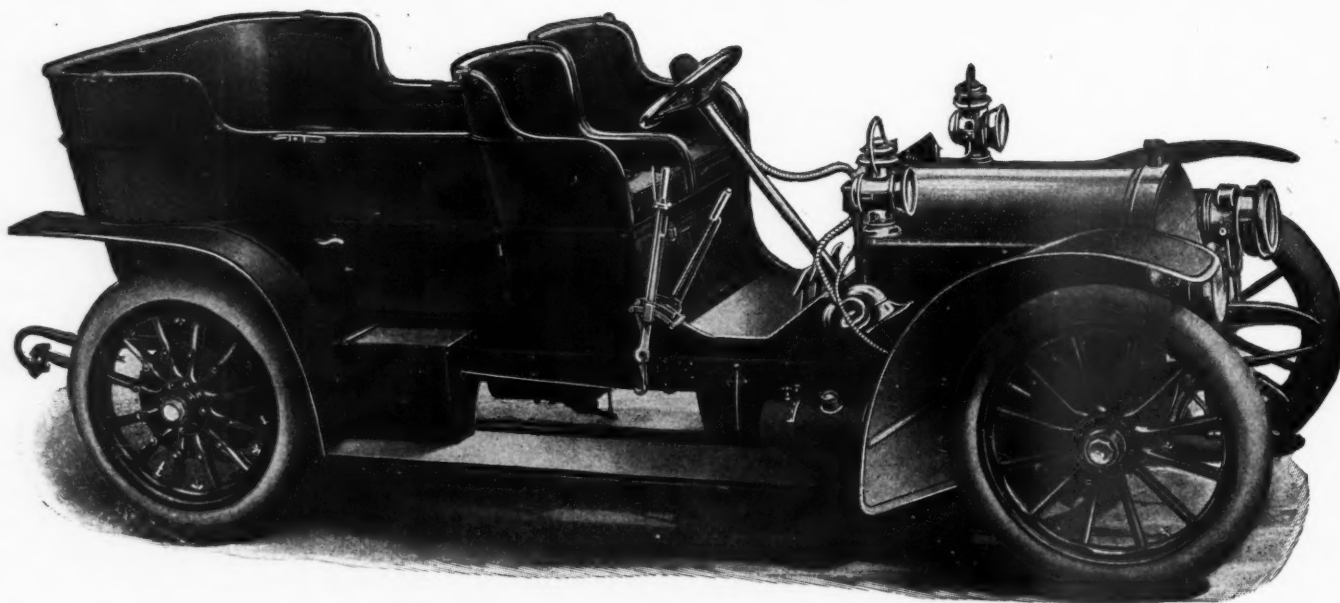
Some of the fake jobbers refuse to furnish the Rushmore light when requested to do so on the plea that we cannot make delivery. That statement is likewise a deliberate lie. They offer to refund your money if not as represented, but you had better hold on to your cash.

We do not ask any money in advance, but will send the Searchlight on ten days' free trial to anyone worthy of credit. The fake jobber can make but 25 per cent to 30 per cent on the Rushmore, while he clears 100 per cent to 200 per cent on the fake lights which he obtains on consignment. Do you wonder that he is willing to cheat you?

Our prices are the lowest for the quality and we ship from stock.

Rushmore Dynamo Works, - Plainfield, N. J.

"WE PAY THE DUTY"



Paris Price, \$7,500 New York Price, \$7,500

The 40-45 American Mercedes—1 H. P. to every 50 pounds. Built from same plans and same materials as are used by our parent Company, The Daimler Motoren Gesellschaft of Unterturkheim, Germany.

Send for booklet giving full information.

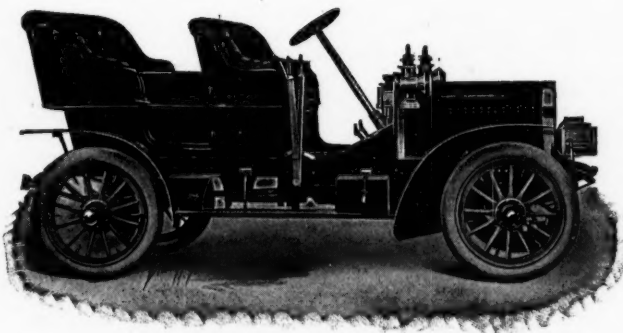
Daimler Manufacturing Co.

973 Steinway Avenue

LONG ISLAND CITY, NEW YORK

New York City Garage, 10 West 60th Street

CORBIN AIR-COOLED CARS



Model D, 16-20 H. P.

MECHANICAL CONSTRUCTION UNEQUALED

Four-cylinder motor located under hood. Crank case instantly accessible through large hand holes in side of case. Steel pan construction efficiently protecting motor, clutch, etc., from mud, dust and water. Valve cages in cylinder heads and easily removable. Double V inlet pipes. Force feed lubrication. Spark and throttle control on steering wheel. Sliding gear transmission, three forward speeds and reverse. Bevel gear propeller shaft drive. A CAR OF LUXURY. Price, complete, with full lamp and tool equipment. Immediate delivery. **\$2000**

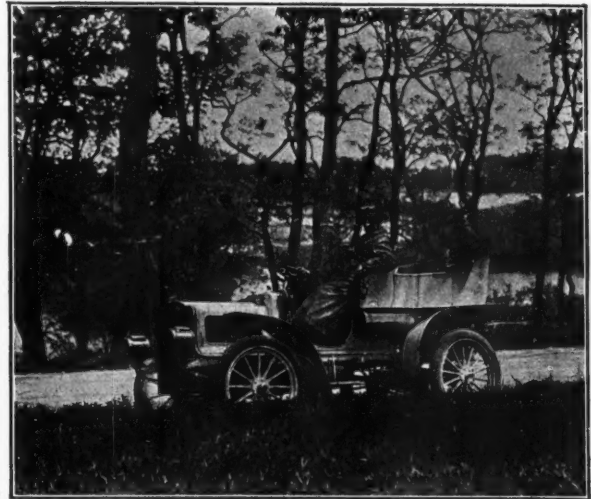
Corbin Motor Vehicle Corp'n

NEW BRITAIN, CONN.

New York Agent, 4 W. 38th St. Boston Agent, 163 Columbus Ave.

THE INCOMPARABLE WHITE

THE CAR FOR SERVICE



In the recent A. A. A. tour for the Glidden trophy, the White squadron of course came through smoothly, swiftly and consistently, just as they have in every other tour ever conducted in this country.

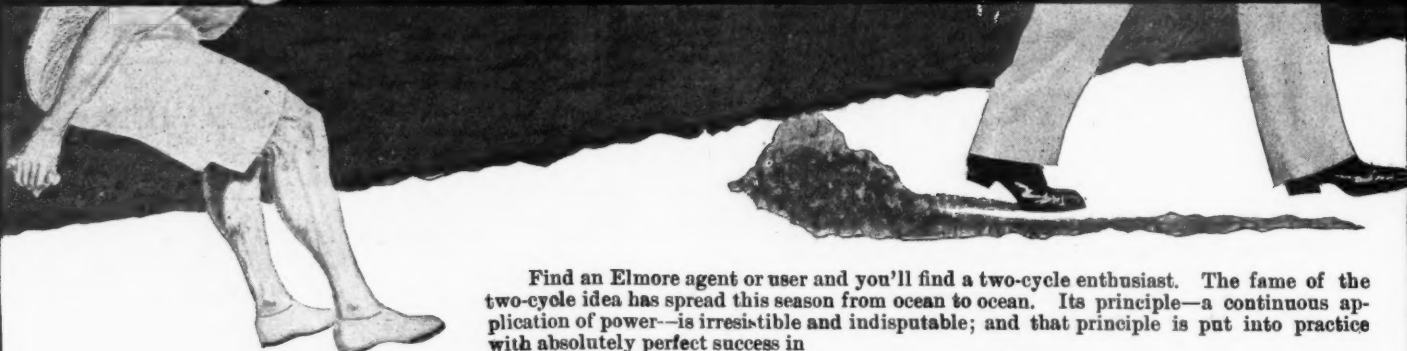
As indicating the relative confidence which private owners have in their machines, we would call attention to the fact that five Whites driven by private owners participated in the tour, as compared with but one of any other single make. At least two of these private owners had perfect scores.

Furthermore, a White was first at the important night stops, Boston and Bretton Woods, and also at Yonkers, the official terminus of the tour.

WHITE Sewing Machine **COMPANY**

Cleveland, Ohio

A Long Jump or Two Short Steps



Find an Elmore agent or user and you'll find a two-cycle enthusiast. The fame of the two-cycle idea has spread this season from ocean to ocean. Its principle—a continuous application of power—is irresistible and indisputable; and that principle is put into practice with absolutely perfect success in

THE TWO-CYCLE ELMORE

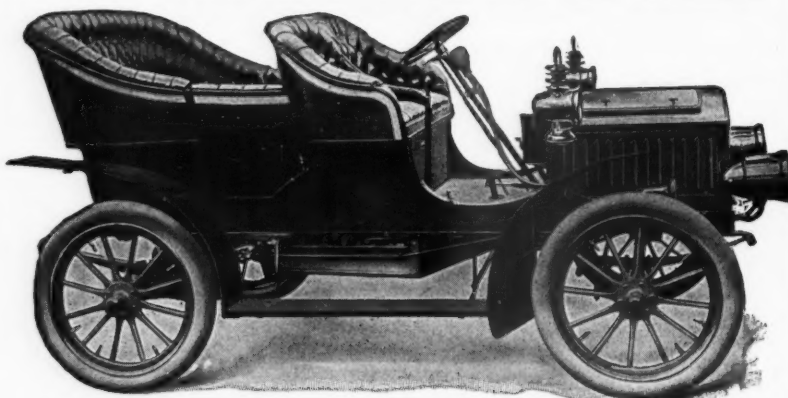
Picture to yourself two men—one trying to cover the ground in long, hard jumps, the other forging ahead in quick, short steps. The first is the four-cycle—and bound to lose against the two-cycle with its even, steady gait. We have a

book called "A Long Jump or Two Short Steps," which explains this in A B C style.

Better still, we have a record of victories in every test worthy of the name. Better still, we have the every-day testimony of thousands of users to which you can easily refer.

The Elmore two-cycle engine is no longer the "coming" engine—it is here. You'd better join the army of enthusiastic converts. Ask your agent or write to us.

Representatives: A. E. Ranney & Co., New York; Gawthrop & Wister, Philadelphia; Seneca Auto Co., Rochester; Young & Miller, Detroit; Hein & Casper, Milwaukee; W. W. Leathers Co., St. Louis; Lowry Mfg. Co., San Antonio; J. A. Rosesteel, Los Angeles.



THE ELMORE MFG. CO.

2304 Amanda Street

CLYDE, OHIO



The ADAMS-FARWELL CAR

LUXURIOUSLY FINISHED

HIGHEST GRADE

25 HORSE POWER

2000 POUNDS

PRICE, \$2500

Other Models

Send for Catalogue

WE QUOTE FROM ONE OF OUR CUSTOMER'S LETTERS AS FOLLOWS:

P. CHESTER MADISON, M. D.,
80 Dearborn Street.

CHICAGO, July 10, 1905.

THE ADAMS COMPANY, Dubuque, Iowa.

Gentlemen:—I am just in receipt of your favor of July 8th relative to the Chicago-St. Paul Carnival Tour and I can assure you that I am delighted to have your official notice that the car finished as well; however, I would have been perfectly satisfied had the car gotten through at any old time, considering the roads and disadvantages which they had to encounter. It certainly increases my faith in the car, although I have always had (since becoming acquainted with the car), the greatest confidence in being able to get through most any kind of a place with patience and careful attention to the car. I find the brougham model is extremely well adapted to my business. Yesterday in taking a long pleasure ride (some thirty miles), and a severe rain storm coming up, also one evening during last week we encountered one of the hardest rains I have seen in this city for several months, we found it very convenient to double up and get inside and raise the windows and go right along.

You may perhaps think that I am an enthusiast regarding the car, but were it not possible for me to get a duplicate of it a man could not buy it from me for \$5,000.00.

I wish to express my thanks to the company for their faithful carrying out of agreements as made with me by Mr. Pickup and for the careful and courteous attention as furnished us by your representative young Mr. Farwell, and should you at any time wish to refer to me with reference to my car, or should you wish to demonstrate, you may use my car as a private car for demonstration to any prospective purchaser, and I shall deem it a pleasure to be at your service.

Always wishing for the success of the Adams-Farwell car, believe me to be,
Very sincerely yours,

(Signed) P. CHESTER MADISON.

The Adams Company

DUBUQUE, IOWA, U. S. A.

"They Are Right and
We Like Them"



Diamond

It may interest you to know that White Steamer No. 67 in the St. Paul tour was equipped with Diamond wrapped tread tires and that they ran through from Chicago to St. Paul without attention of any kind. The run was made over very rough roads. WALTER C. WHITE.
July 5, 1905.

I drove the Rambler pilot car in the St. Paul tour. The roads were the worst I ever experienced. Our car was equipped with Diamond tires, which gave absolutely no trouble. ARTHUR GARDINER.
July 8, 1905.

In the recent Chicago-St. Paul run my Packard car was equipped with Diamond tires. I made the entire trip with absolutely no tire trouble, the tires showing hardly any wear whatever. F. J. PARDEE.
July 10, 1905.

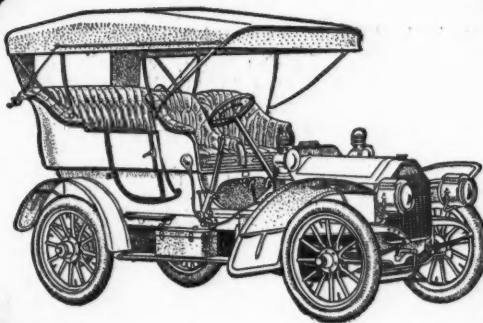
All the way from Chicago to St. Paul in a Reo touring car equipped with Diamond wrapped tread tires without inflating a tire! *They are right and we like them.* The roads were the "fiercest" ever encountered by an automobile. The tires are practically as good as when we started. ANNA M. ANDREWS.
July 10, 1905.

THE DIAMOND RUBBER CO.
AKRON, OHIO

BRANCHES:

NEW YORK.....	78 Reade Street
NEW YORK.....	1717 Broadway
BOSTON.....	174 Columbus Avenue
BUFFALO.....	41 Court Street
PHILADELPHIA.....	304-306 N. Broad Street
CHICAGO.....	1241 Michigan Avenue
CHICAGO.....	167-169 Lake Street
DETROIT.....	310 Woodward Avenue
ST. LOUIS.....	3966 Olive Street
SAN FRANCISCO.....	608 Mission Street
MINNEAPOLIS.....	611 First Avenue, S.
DENVER.....	1735 Arapahoe Street
CLEVELAND.....	323 Huron Street
ATLANTA.....	94 North Pryor Street

Peerless
THE
CAR of
ACHIEVEMENT



SIX TO ONE

Last year there was ONE Peerless car running over the roughest parts of the Rocky Mountains, and it cost just \$22.00 for the entire season.

This year there are SIX Peerless cars in the Rockies and three of them are being used by a transportation company in place of stages. As the stage manager puts it—"The Peerless beats the horse for speed and beats every other make of car for all around reliability."

Booklet, sent on request, describes the experience of the Peerless in the Rocky Mountains.

The Peerless Motor Car Co.

Lisbon Street, Cleveland, Ohio

Member A. L. A. M.

The World's Test of Tires in the World's Greatest Event The Gordon-Bennett Race of 1905

Three Cars Each Representing

France, England, America, Italy, Germany, Austria

Eighteen of the best cars in the world sent to compete for the blue ribbon prize of the automobile world.

The Auvergne course was selected by M. Michelin, and by common consent was the most difficult of routes, embracing over 200 turnings and twistings, many at violently sharp angles. The terrific strain on tires can be but faintly imagined. The race was a test of tires, and how well Michelin Tires stood the test the results eloquently show.

MICHELIN TIRES WON

and the victory was overwhelming and complete.

1st. THERY (Richard-Brasier)	...	...	...	...	MICHELIN TIRES
2d. CAGNO (F. I. A. T.)	...	...	...	...	MICHELIN TIRES
3d. NAZZARI (F. I. A. T.)	..	...	..	...	MICHELIN TIRES
4th. CAILLOIS (Richard-Brasier)	..	...	...	...	MICHELIN TIRES

The superiority of Michelin Tires has always been conceded by those who know. It is now definitely and incontestably established that Michelin Tires stand alone. The whole world now knows it. There can be no more skeptics.

BRANCHES

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BOSTON, 751 Boylston Street.
PHILADELPHIA, 322 No. Broad Street.
WASHINGTON, 1330 New York Avenue, N. W.
SAN FRANCISCO, 304 McAllister Street.
ROCHESTER, 21-29 Plymouth Avenue.
BALTIMORE, 102 East Eager Street.
MINNEAPOLIS, Winston and Walker.
ST. LOUIS, 3935 Olive Street.
INDIANAPOLIS, Indiana Automobile Co.
ST. PAUL, C. P. Joy Auto Co.
CINCINNATI, 904 Broadway.
BUFFALO, 369 Pearl Street.
PITTSBURG, 5903 Center Avenue.
UTICA, 12-18 Lafayette Street.
POUGHKEEPSIE, 14-20 Catherine Street.
ALBANY, 97-101 Central Avenue.

Michelin Tire American Agency, Inc.

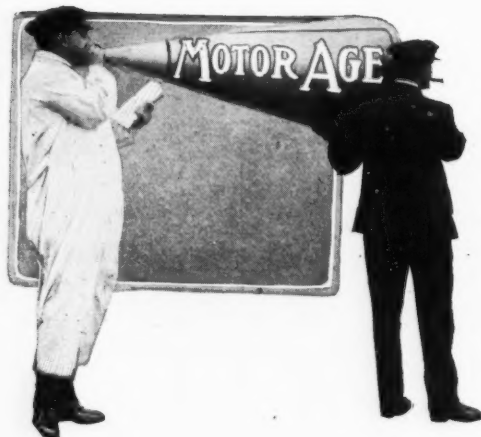
6 West 29th Street, New York

E. D. WINANS, General Manager.

Telephone---4657 Madison

MOTOR AGE

TELLS YOU
THE NEWS



AND TELLS
IT FIRST

OF THE TRADE, TOURING AND RACING

It is the Official Announcer

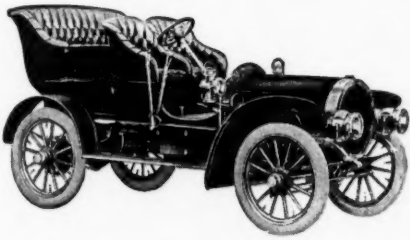
\$2.00 per year
52 issues

It's better now
than ever before

MOTOR AGE
309 Michigan Avenue
Chicago

National Motor Cars

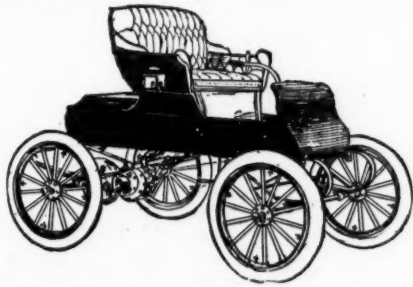
"WATCH FOR THE ROUND RADIATOR"



National
Model C.
24-30 H. P.
4 cyl., 4½x5

A touring car decidedly in advance of the times.
A type of car that will be extensively copied in the near future.
Ample power and speed, perfect control.
All working parts simply arranged and remarkably accessible

National
Electric
Runabout



One of several handy little electric cars which are unsurpassed for convenience and comfort. Write for our catalogues.

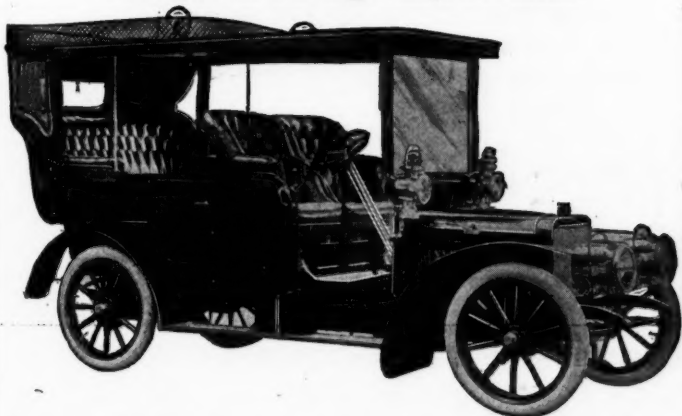
NATIONAL MOTOR VEHICLE CO.

Members American Motor Car Manufacturers' Association, Chicago.

1006 East Twenty-second Street, INDIANAPOLIS, IND.

THE DARRACQ

Represents the Most Advanced
Features in Foreign Improvement



Equipped with the Latest Magneto and Jump Spark
Ignition :: Perfect Automatic Throttle
Control :: Positively Noiseless

LET US PROVE THIS TO YOU

ALL PARTS KEPT IN STOCK

THE F. A. LA ROCHE CO.

Licensed Importers under Selden Patent 549,160.

652 to 664 Hudson Street, :: :: NEW YORK

Up Town Store, 147 W. 38th Street, NEW YORK



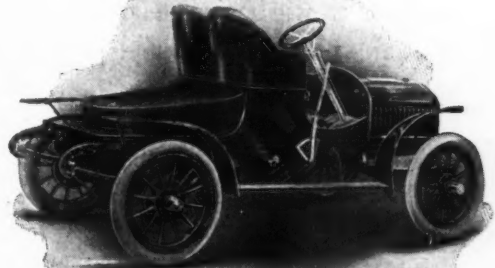
WAYNE

Three
Distinct
Models

\$800—A two passenger, 16 H. P., 2 cylinder (5x5) Runabout.

\$1,250—A five passenger, 20 H. P., 2 cylinder (5¼x5) Touring Car.

\$2,000—A 24-28 H. P. Touring Car, 4 cylinder vertical engine, sliding gear transmission and fewer moving parts than any other 4 cylinder car made.



This is the Wayne **\$800**
2 cylinder Runabout

A 16 H. P. car, double opposed cylinders 5x5, divided seat. A speedy, powerful, knock-about car at about the same price you have been paying for single cylinder machines.

MR. AGENT, wouldn't it be a good idea to look into the Wayne proposition? Here is a car that sells itself and this is only one of the many opportunities on which the Wayne Co. offers its agents a chance to make speedy sales and quick profits.

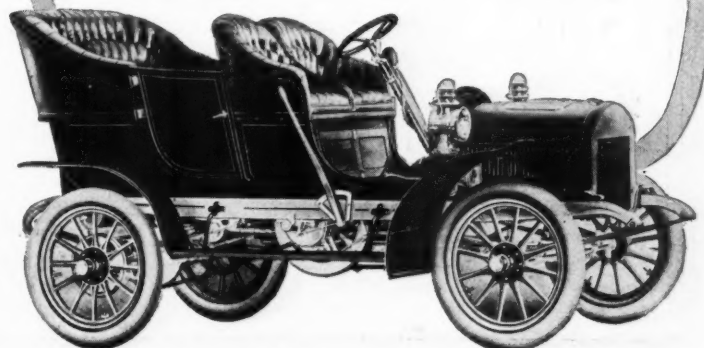
There are other good things in store for Wayne Agencies.

Let us get together soon.

The Wayne Automobile Co.

Dept. H, Detroit, Mich.

Member American Motor Car Manufacturers' Association, Chicago
New York Agency, The Wayne Automobile Co., 1659 Broadway
Boston Agency, Wayne Automobile Co. of New Eng., Cor. Berkeley and Tremont



Columbia

35-40 H. P. CARS

UNEQUALED IN CONSTRUCTION, FINISH,
EQUIPMENT, PERFORMANCE

\$4,000 to \$5,500, ACCORDING TO BODY

SIDED OR TONNEAU, ROYAL VICTORIA, DOUBLE VICTORIA, LANDAULET, LIMOUSINE

Separate Catalogues of Columbia, 35-40 h. p. and 18 h. p. Gasoline Cars,
Electric Carriages and Electric Commercial Vehicles on request

Electric Vehicle Company, Hartford, Conn.

New York Branch: 134, 136, 138 West 39th St.

Chicago Branch: 1413 Michigan Ave.

Boston: Columbia Motor Vehicle Co., 74, 76, 78 Stanhope St.

Washington: Washington E. V. Transportation Co., 15th St. and Ohio Ave.

Philadelphia: Pennsylvania Electric Vehicle Co., 250 North Broad St.

Member Association Licensed Automobile Manufacturers.

Parts for 1906 Automobiles:

For the convenience and assistance of automobile builders we have prepared complete drawings of our 1906 model pressed steel frames and frame members, and other parts, which will be mailed upon application. We are prepared to build pressed steel frames, change gears, front and rear axles and other parts in any quantity for early delivery.

STEEL STAMPINGS:

We make a specialty of steel stampings of all descriptions, including hubs, parts, brake drums, etc.

STEERING WHEELS:

Another specialty of ours—we make the best steering wheel rim on the market, and a large variety of spiders for application to any steering column.

Send for our Steering Wheel circular

A.O. SMITH COMPANY

Milwaukee, Wisconsin.

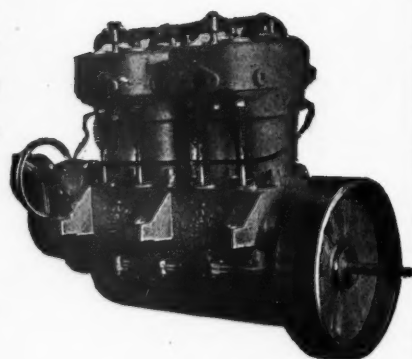


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PRODUCT**

MOTORS

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Automobiles
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Mining
Machinery
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Etc.



CHAS. KAESTNER MFG. CO.

SOUTH BEND, INDIANA

BEAVER MOTORS

14 H. P.



Horizontal Opposed Cylinder Engine, 4x4.

HAVE PROVEN THEIR
VALUE in ACTUAL SERVICE
BECAUSE THEY ARE
SKILFULLY MADE AND
MECHANICALLY CORRECT

If you are interested in Efficiency,
Durability and Neatness of Design,
write us.

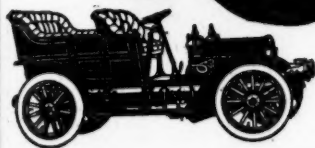
BEAVER MFG. CO.
MILWAUKEE, WIS.

16-18 H. P.



Horizontal Opposed Cylinder Engine, 5x4½.

Locomobile



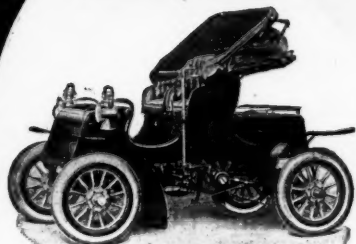
The *Locomobile* Company of America, Bridgeport, Conn.
Member Association Licensed Automobile Manufacturers.

NEW YORK, Broadway and 76th St.
PHILADELPHIA, 249 N. Broad St.

BOSTON, 15 Berkeley St.
CHICAGO, 1354 Michigan Ave.



KNOX WATERLESS CARS



Runabout Model F-1 \$1,500

For
BUSINESS
and
PLEASURE

combined this Runabout is the highest type of vehicle. It is *simple, easy of operation, and honestly made.* A two cylinder, air-cooled, 14-16 H. P. car with folding front seat. Carries 2 or 4 persons. Ideal for the physician, or business man and his family.

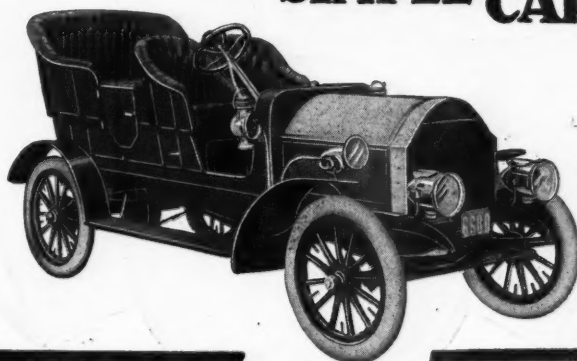
Catalog on application. Agents in all principal cities.

KONX AUTOMOBILE CO.

Springfield, Mass.

Member A. L. A. M.

GAS-AU-LEC "THE SIMPLE CAR"



A 40-45 H. P. 4-cylinder, 4-cycle engine, five passenger, side entrance, Gasolene Touring Car of the Highest Grade.

WITHOUT Starting Crank; Camo; Valve Gearing or Complications
Change Speed Gears; Rocker Shafts; Tappets;
Clutch;

Every movement of the motive power and the car, from a state of absolute rest, forward at any speed or reverse, is controlled by one lever, operated either by hand or foot, as preferred. Positively no other speed or movement controlling device of any kind on the car. Triple brakes—irreversible steering gear.

The GAS-AU-LEC is the Simplest Gasolene Car in the World
—both as to construction and control, and the easiest to operate and maintain.

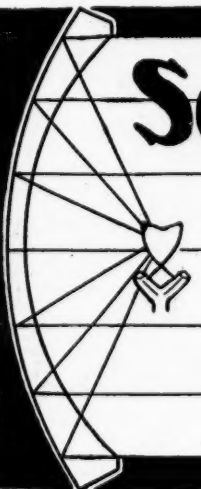
ELEGANT IN FINISH LUXURIOUS IN APPOINTMENTS
BUILT BY SKILLED WORKMEN FROM THE BEST MATERIALS OBTAINABLE
CORWIN MANUFACTURING CO.

Formerly Vaughn Machine Co.

PEABODY, MASS., U. S. A.

"Marks a New Era in Automobile Construction."

Search Light Mirror Lenses



Bausch & Lomb Optical Co.
Rochester N. Y.

The Everlasting Question

in every motorist's mind is the one regarding "speed"—"how far and how fast am I going." Without accurate means of registering speed no man can well approximate the rate at which he is traveling in an automobile.

THE AUTO-METER

answers the questions and does it so precisely that whether the speed is one mile or one hundred miles per hour, the rate is plainly and steadily shown upon the indicator.

Because of the proven positiveness of its principle of operation, it **CAN'T GO WRONG.**

Send for proof from thousands of users whose praise of the Warner Auto-Meter must convince you of its sterling value. The "Auto-Meter" was used continuously day and night by Guy Vaughan, at Morris Park, and C. G. Wridgway, at Brighton Beach, in their record-breaking 1000-mile races against time, and highly praised by both of them for its efficiency. You ought to know "How Fast and How Far" you go.

Write for full information.


WARNER INSTRUMENT CO., 52 Roosevelt Avenue, Beloit, Wis.
39 Cortlandt St., New York 143 Federal St., Boston



The "Auto-Meter" Showing Warner Speedometer and Odometer, with Season and Trip Dials

"THE MIDNIGHT SUN"


SOLAR MOTOR LAMPS



If you don't drive at night you don't need a lamp of any kind, but if you do, there is no more important part of your car than the lamp. Reliability and an intense light characterize the SOLAR, and are due to proper construction of lamps and correct principle of generator.

Experienced drivers demand SOLAR—why not furnish them? They cost but little more than "good enough" lamps and give absolute satisfaction. Illustrated catalog for the asking.

BADGER BRASS MFG. CO., Kenosha, Wis.
New York Office, 11 Warren St.



DIETZ

Some of the other manufacturers of Oil Lamps claim that their Lamps burn as well as the Dietz, but the question is—do they? The only way to find out is to try them both, and after you have tried the other lamps then try ours and see the difference.

R. E. DIETZ COMPANY, 33 Laight St., New York
ESTABLISHED 1840

BRENNAN MOTORS

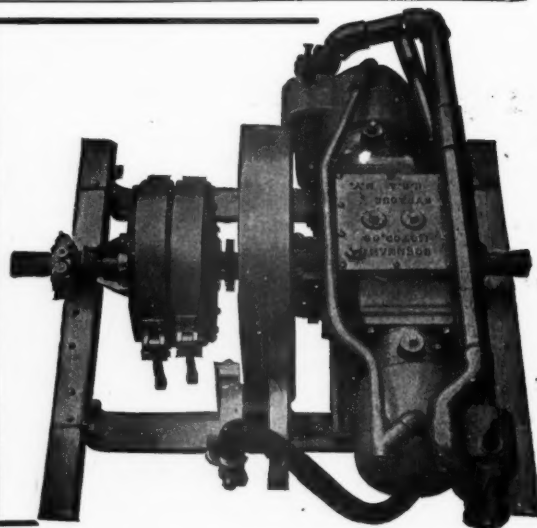
6 - 8 - 12 - 14
16 & 20 h. p.

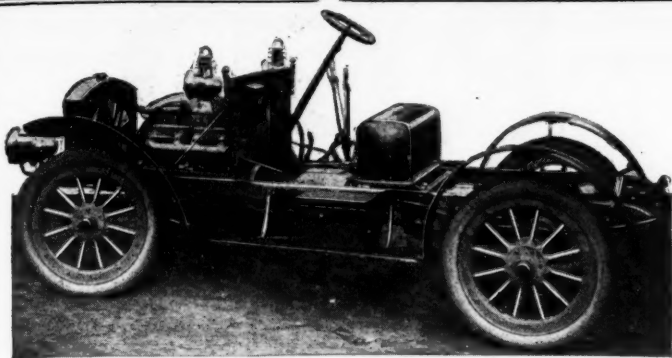
Simple in Construction. Easy to Adjust. Large Bearings. Powerful Action.

GUARANTEED TO SATISFY

WRITE

Brennan Motor Co., Syracuse, N. Y.





A great big, magnificent Car in appearance, silent in operation, 108 inch wheel base, 28-32 h. p., 4 vertical cylinders, $4\frac{1}{4} \times 5$ inches.

The Pendleton.

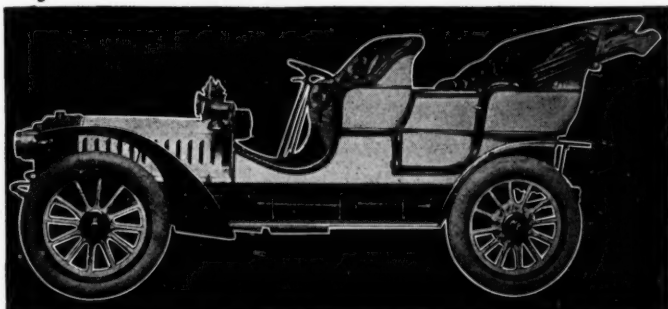
Here is a car possessing positively every PROVEN improvement in motor car construction. It is as perfect in every detail as human ingenuity and the highest grades of materials can make it, and we GUARANTEE

IMMEDIATE DELIVERIES

THE TRUMBULL MFG. CO., ... Warren, Ohio

AUSTIN

A LUXURIOUS CAR



THAT LOOKS THE PART

Four-cylinder, 5 1-2 in. bore, 5 in. stroke, 50 h. p., weight 2,500 lbs., price \$3,500.

Full Extension Top, \$150.00 extra. 108 inch wheel base, 36 inch wheels, 4 1-2 inch tires, 44 1-2 inch rear seat. Bevel gear drive, direct on high speed. Our new sliding gear transmission has four forward speeds. Write for complete description.

AUSTIN AUTOMOBILE CO.
GRAND RAPIDS, MICH.

THE MOLINE



12 H. P.

Model "D"

\$1000

Double Cylinder Opposed Motor. [$4\frac{1}{2}$ in. \times $4\frac{1}{2}$ in.] 86-inch wheel base. 30-inch wheels. $3\frac{1}{2}$ -inch tires, rear; 3 inch front. Detachable tonneau with wide side entrance.

Model "B"—4 Cylinder, 18-20 H. P. Touring Car, \$1600.

Model "E"—12 H. P. Double Cylinder Car. Detachable side-entrance tonneau. Powerful and speedy rig. **\$850.**

Model "F"—12 H. P. Double Cylinder Car. A substantial machine with side entrance tonneau. Similar to Model "E," except slightly smaller body. **\$750.**

MOLINE AUTOMOBILE COMPANY

Members American Motor Car Manufacturers' Association, Chicago.

EAST MOLINE, ILLINOIS

MEAD MOTOR CO., Chicago Agents

Have you seen the new **KOKOMO** Mechanically - Attached AUTOMOBILE TIRE ?



**It is just what you
Have been looking for**

Quickly attached and detached.
Creeping and Rim Cutting entirely avoided.
Made of the very best material and workmanship
throughout.
Write us for full particulars.

Kokomo Rubber Co., Kokomo, Ind.



Finger-Reach Control

In this car all controlling levers are assembled at the steering post. Wheel, gear shift, clutch, throttle and spark control are all within finger-reach, so that the operator need never take either hand away from the steering post. This arrangement, together with the responsiveness of the Autocar running mechanism, makes this car easier and simpler than a horse to drive. The greatest value ever offered in a light four-passenger car is

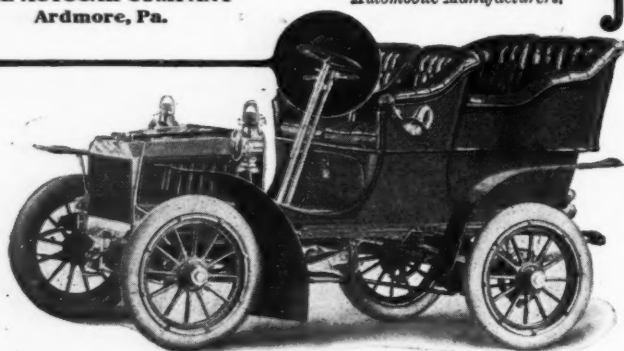
Type VIII, **AUTOCAR** at \$1400

Horizontal two-cylinder opposed motor—no noticeable vibration. Twelve actual horsepower. Three speeds forward and a reverse. Ball bearing, shaft drive. Front and rear construction has ball bearings throughout. Gasoline tank holds 10 gallons—sufficient on good roads for 200 miles.

Engine and transmission case are accessible from above without disturbing body. Catalogue describing Type VIII, Type X Runabout, and Type XI Four Cylinder Car, with dealer's name sent free.

THE AUTOCAR COMPANY
Ardmore, Pa.

Member Association Licensed
Automobile Manufacturers.



The Kellogg Multiple Gear Pump...

**JOBBER
DEALERS
USERS**

This is the limit of perfection. ... 1906 Catalogue will soon be ready.

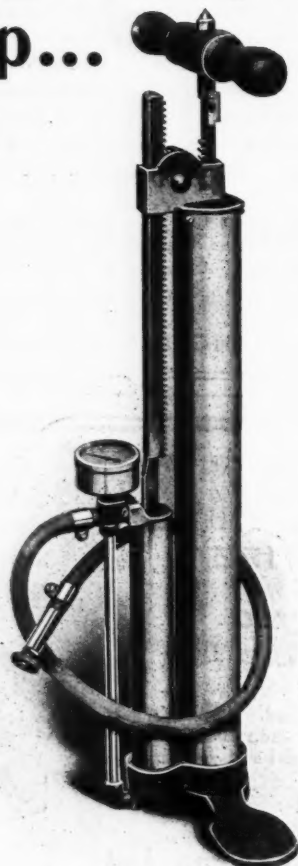
... Write...

**WRAY PUMP &
REGISTER CO.**

191-193 Mill St.

Rochester, N. Y.

Or Brandenburg Bros. &
Alliger, 103 Reade St.,
New York City, 85 Lake
St., Chicago, Ill.



REO

Runabout True to its type

A runabout pure and simple; with all the lightness, handiness and "go" that belong to its type; and a good bit more than any other motor car of anywhere near its price.

It has the long-stroke horizontal piston that pushes the car along on all grades; the strong, simple transmission; dust-proof mechanism, and special R. E. Olds radiating and lubricating systems, which do away with repair bills and make all REO cars a wonderfully economical proposition.

**It is here and ready
Come and let us demonstrate**

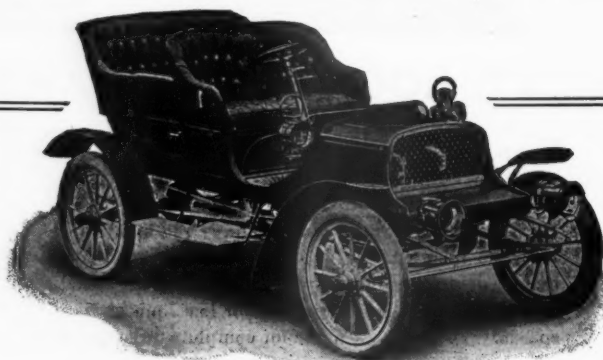
While you are about it, ask to see that REO TOURING CAR—the car that beat everything in its class and more, in the recent hill-climbing contests East and West. 16 h. p., 1500 pounds, 5 passengers; 35 miles per hour; divided front seats; detachable side-door tonneau; \$1250.

REO Motor Car Co.

R. E. Olds, President Factory, Lansing, Mich.
R. M. Owen, Sales Mgr. 138 W. 38th St., New York
Agencies throughout the United States



REO
Runabout
8 h.p.
900 lbs.
2 passenger
25 miles
or more
per hour
Price \$650



In considering the purchase of a motor car the drivers' minds naturally drift to the *cost of maintenance*, and in this particular, The Premier Four-Cylinder, Air-Cooled Car,

"The Quality Car"

should appeal to them strongly.

Fuel consumption, fewness of repairs, and the ease and facility with which the few necessary ones are accomplished, are potent features of Premier construction.

In this connection the initial cost of a car becomes a secondary instead of a primary consideration.

Then too, the well known efficiency of Premier cars, under all conditions of climate, temperature and road surface, with their abundance of power and speed, easy riding qualities, and handsome appearance, makes them the ideal vehicle.

Send for catalogue and book of testimonials.

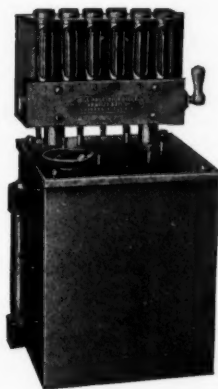
PREMIER MOTOR MFG. CO.
1001 George Street Indianapolis, Ind.

Members American Motor Car Manufacturers' Association, Chicago.

THE HILL PRECISION OILER

INSURES PERFECT LUBRICATION

**Your Money Back if it
Does Not do the Work**



It measures the oil, and uniformly forces exact quantities to each bearing it serves, regardless of the resistance, or of the varying resistance, in the different tubes. It feeds only when the machinery is in motion.

THE STEEL BALL COMPANY
832 Austin Avenue
CHICAGO, U. S. A.

THE LIMIT

**OF UNFAILING
CARBURETER
EFFICIENCY**

Here's Proof

From the
Four Wheel Drive Wagon Co.
of Milwaukee
Commercial Motor Vehicle
Builders



... After expending about \$150 for various makes of carbureters and finding them all defective because of lack of range in throttling the engine, we were much pleased upon installing your Acorn carbureter.

We find this carbureter feeding the engine evenly and properly from the lowest to the highest speeds and we do not hesitate to recommend it as the best carbureter we have tried.

It fed our engine properly in all our recent tests, hauling as high as 27,000 lbs. gross weight on our truck, never missing explosion a single time. * * * ETC. FOUR WHEEL DRIVE WAGON CO., H. Theo Hansen, V. Pres. and Mgr.

It's not what we claim, so much as what actual users say of

ACORN CARBURETERS

that proves their Sterling Reliability. A trial will convince anybody. Write

BLACK & KRUEGER
Milwaukee Wisconsin

**Pictures
4x5
inches**

**Perfect
in every
detail**



PREMO REFLECTING CAMERA

FOR RAPID PHOTOGRAPHY

Shows object full picture size and right side up while making exposure.
Half the size of other cameras for rapid photography.

FOCAL PLANE SHUTTER—Speed limit, 1/1000 second. Glass
Plates or Daylight Loading Premo Film Pack.

Price, \$85.00 (without lens)

20 OTHER STYLES OF PREMOS.

Send for 1906 Catalogue.

Rochester Optical Co., Rochester, N. Y.



You can't help but notice that in the "SWINEHART TIRE" there are no freak ideas. Nothing but the regular standard clincher rim with a tire having concave sides and corrugated tread. This does the work and has been tested for two years in practical service by the public. No experiment. Just ask the man who has them.

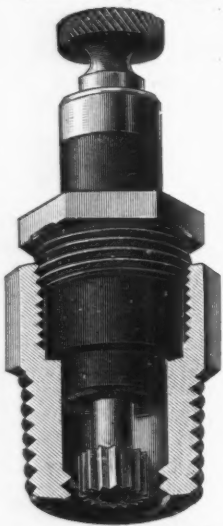
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Swinehart Clincher Tire & Rubber Co.

AKRON, OHIO

ALBRIGHT ◆ SPARK PLUG ◆ ALBRIGHT

Patented March 14, 1905



"ALBRIGHT"
IT CANNOT BE FOULED

SPECIAL PROPOSITION TO MANUFACTURERS

CAMP CYCLE CO.

Manufacturers and Distributors

COLUMBUS, GA.

**Manufacturers, Dealers and Owners
of Gasoline Engines. READ THIS**

Letter from proprietor of the
largest furniture house and
mattress factory in the South:

Columbus, Ga., July 17, 1905.

Camp Cycle Co., City.

Gentlemen: I am using an 8 horse-power
air-cooled gasoline engine for power in my factory.
We used many different kinds of spark
plugs before we got one of yours, and all of
them gave us trouble frequently, but since your
"ALBRIGHT" plug was put in my engine I
haven't had a minute's trouble, and have never
removed it for any purpose whatever. You
have the best plug I have seen yet. Trusting
this will be of some use to you, I remain,

Yours truly,
(Signed) J. L. B. JOHNSON,

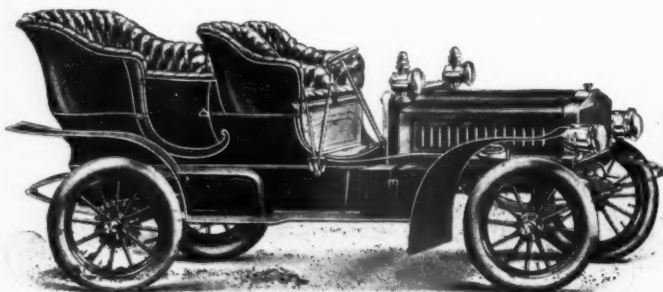
**WE WANT YOUR BUSINESS. WRITE
TODAY FOR SPECIAL PROPOSITION.**

Your money back after
thirty days' trial if you
are not satisfied.

THE LAMBERT

The Famous Friction Drive

GUARANTEED FOR ONE YEAR



Model 7-28-32 h. p.—\$2000

We Manufacture Five Different Models

**WE CAN MAKE QUICK DELIVERY
WE HAVE THE PROPOSITION FOR AGENTS
WRITE FOR CATALOGUE**

THE BUCKEYE MFG. CO.

ANDERSON, IND.

Member American Motor Car Mfrs. Assn., Chicago

The Von Schwarz

None Genuine Without
J V S
on Tip and Pillar

Acetylene Burners

SOME ADVANTAGES

They are Recognized Standard Burn-
ers the World Over

Accurate in consumption. Free
from carbonization and other
troubles, and they are

Licensed under Patent 589342,
August 31, 1897. This patent
has been adjudicated by the U. S.
Court of Appeal and is **VALID**.

We advertise not only our burners,
but also those firms who confine
themselves to equip their lamps
with **Licensed Burners**.

Is there any reason why you should
equip your lamps with cheap

infringing imitations? **Protect your customers as
we do protect you.**

For Information and Prices Apply to

H. KIRCHBERGER & CO.,

GENERAL LICENSEES,

50 Warren St., New York



How fast?

How far?

What time?



All these important questions are answered by a glance at the

Lea "Speedistimeter"

Tells speed, distance and time of day.

Tested for accuracy and guaranteed not to vary more than
1 per cent.

Enclosed in waterproof case and easily attached to any car.

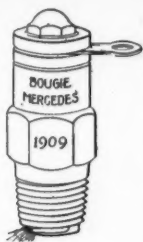
Write for booklet B and proposition to agents.

William S. Jones

Sole Selling Agent for
Motor Car Specialty Co., Trenton, N. J.

112 North Broad Street Philadelphia

We are bold
enough to say
There is only one
really first class coil
on the market to-day.



It's **GUENET'S**—the finest French Coil made.



With
**Carpentier
Interrupter
and
Magnetic
Governor**
Guaranteed never to stick.
No adjustment.

New Prices! 1-Cylinder—\$16 3-Cylinder—\$48
2-Cylinder—29 4-Cylinder—59

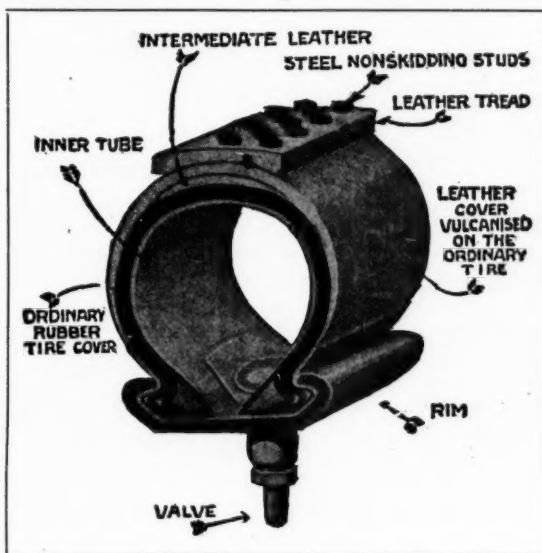
Write for our new Vademecum of Ignition.

Herz & Co., 187 Elm St., New York

Also Makers of the HERZ-TIMER, Plugs, Switches, etc.

SAMSON LEATHER TIRE

NON-SKIDDING :: :: PUNCTURE PROOF



A. E. GALLIEN, Manager

UNITED STATES BRANCHES:

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Boston: 20 Park Square

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Philadelphia: 1120 Chestnut Street

STANDARD PARTS FOR POWER TRUCKS AND WAGONS

The marked economy of power wagons for delivery, express and truck service, and their superior reliability when in reasonably intelligent hands, is so well established that those who are conversant with the facts cannot fail to see that power wagons are rapidly beginning to supersede horse service.

PARTS WE SUPPLY

STEERING GEAR, Complete
COUNTERSHAFT and REDUCTION GEARS
FRONT AXLES, Complete SPROCKETS
COUNTERSHAFT BRAKES HUB BRAKES
DISTANCE RODS MOTOR HANGERS

SEND FOR CATALOGS Nos. 2, 3 and 5

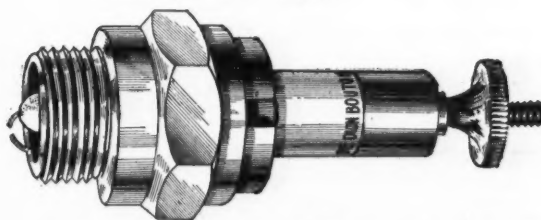
TOURING CAR PARTS, CATALOGS Nos. 6, 7, 9, 12 and 13

The Garford Company ELYRIA OHIO

Selling Agent, **HAYDEN EAMES**
American Trust Building : CLEVELAND

FIRST IN THE COUNTRY First in the Hearts of the Automobilists

The one standard automobile plug of the world. The one that has been used for years and is still considered the best plug on the market, regardless of the great number that are now being manufactured in this country and Europe.



The 1906 Genuine DeDion Spark Plug

The above illustration shows the 1906 Genuine DeDion Plug. We have just received the first of these plugs that have been imported to this country.

Price, \$1.50 each, mailed to any address.

Charles E. Miller

Manufacturer, Jobber,
Exporter and Importer

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Branches

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202-204 Columbus Ave., Boston, Mass. 406 Erie Street, Cleveland, Ohio

ACME MOTOR CARS

POSITIVE CONTROL—STARTING AND STOPPING ABSOLUTELY RELIABLE—GOING AND COMING

Without flourishes or fads Acme Motor Cars are the most widely developed and thoroughly practical made.

Are simplest in construction and easily accessible at any working point.

DEMONSTRATION IN TEN CITIES

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J. W. Mears, Brooklyn
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Boston Motor Co., Boston
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Acme Motor Car Co. of N. Y.,
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Baldwin Standard Chains

are used
on all high grade cars

Made DETACHABLE or RIVETED

Send for Catalogue

We also make Sprockets of all kinds

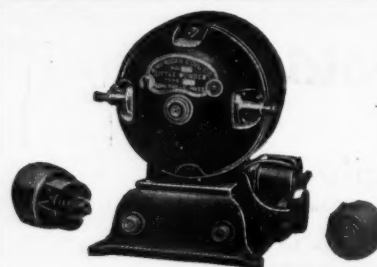
BALDWIN CHAIN & MFG. CO.

Worcester, Mass.

PETERSON & DRAPER

166 Lake Street, Chicago, Ill.

SALES-AGENTS



THE AMERICAN LITTLE WONDER DYNAMO

Has system of storage in the base; requires no other batteries for starting. If you desire a first-class machine at a low price, be sure and get the LITTLE WONDER

AMERICAN COIL CO. P. O. BOX 591
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AUTO SUPPLY CO., 1662 Broadway, New York Agents

GEO. H. BILL, 305 Larkin St., San Francisco, Cal.

"PILE-BLOC" BATTERIES

100 to 2000 Amp.-Hours



The "Pile-Bloc" Company

253 BROADWAY

Standard Roller Bearing Company

MANUFACTURERS

Steel Balls, Bronze Balls
and Brass Balls

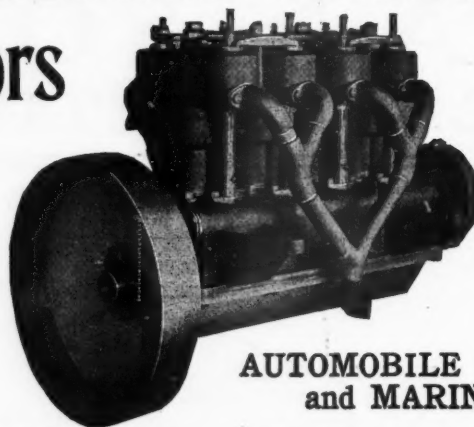
USE "HIGH DUTY" BALLS FOR AUTOMOBILES

Send for Catalogue of Ball Bearings, Roller Bearings and Automobile Axles.

Standard Roller Bearing Company, Philadelphia, Pa.

HERSCHELL - SPILLMAN Motors

H. P.
16-18
24-30
45-55



AUTOMOBILE
and MARINE

Herschell-Spillman Co., No. Tonawanda, N. Y.

STOLP COOLERS



Patents Pending

GOOD COOLERS



Stolp Mfg. Co.
CHICAGO

LATEST TYPE WILLARD LATEST TYPE STORAGE BATTERIES

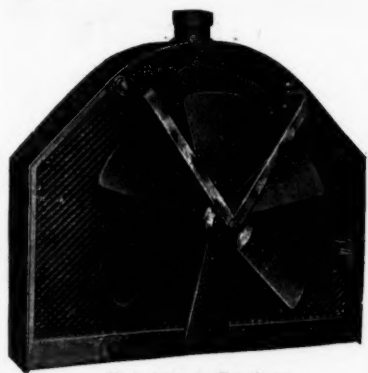
ARE OPERATING ELECTRIC
AUTOMOBILES REGULARLY

75 MILES AND OVER ON ONE CHARGE

WRITE FOR PARTICULARS

The Willard Storage Battery Company

Cleveland, Ohio



THE WHITLOCK COOLER

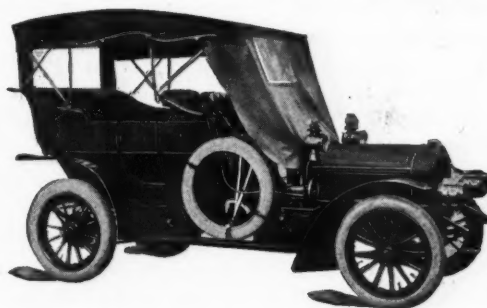
Tested and Adopted by
90 Per Cent
of the Leading
Manufacturers of
HIGH GRADE CARS
FOR 1903-1904-1905

U. S. Patents Pending.
Patented in England, France and Belgium.

Any Design or Style of Cooler Made to Order.

THE WHITLOCK COIL PIPE CO., HARTFORD, CONN.

CATALOGUE ON REQUEST



APPERSON BROS. KOKOMO INDIANA

Several Slightly
Used
Pope-Toledos
(24 H. P.)

Regular List Price From
\$3,750 to \$4,000

Specially Reduced To
\$1,750—\$2,250

And Each Car GUARANTEED
O. K. in every particular.

"Pope-Toledo"

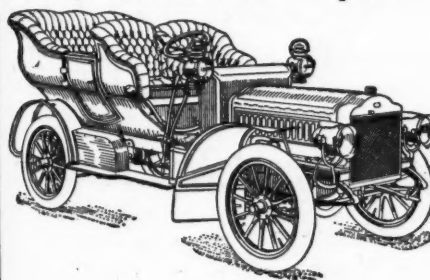


WILL OVERHAUL AND REPAINT ANY COLOR TO SUIT.
Complete Equipment of Lamps and Tools with each Car. :: ::

ORLANDO F. WEBER CO. 1322-24-26 Michigan Av.
CHICAGO, ILL.

Milwaukee Store, 341-23-25 Fourth Street

The Thomas Flyer Touring Car



Said and Done

"Wins Minneapolis Hill
Climb over all American
Cars, 2000 feet, 10 per cent
grade, 34 1-4 seconds."

"My car has beaten
everything in this city in
the shape of an automob-
ile."—W. P. Johnston,
New Orleans.

FULL CATALOGUE ON REQUEST

E. R. THOMAS MOTOR CO.

1202 Niagara Street, Buffalo, N. Y.

Member Association Licensed Automobile Manufacturers.



MUD
FORGET IT AND USE
WEED'S TIRE GRIPS.

POSITIVELY STOPS SLIPPING OR SKIDDING.
THEY MAKE BAD ROADS GOOD.

WEED CHAIN TIRE GRIP CO.

SEND FOR
BOOKLET "C"

28 MOORE ST.

NEW YORK CITY.

STOP THAT NOISE!

NEW PROCESS PINIONS

Will stop the racket made by your
Time Gears, Pump Drive Gears or
Igniter Gears, and will outwear all
other kinds of Noiseless Pinions.

LET US HEAR FROM YOU.

THE NEW PROCESS RAW HIDE CO.

SYRACUSE, NEW YORK

GILSEY HOUSE

UP-TOWN

Corner 29th and Broadway
New York

Rates \$1.50 up

Cafe a la carte

GEORGE W. MOORE, Manager

Double Service

Owners of automobiles or launches who
use the **Apple Automatic Sparker**

have no trouble with weak storage batteries
or ignition faults of any kind.

With the **Apple Automatic Sparker** you
can keep your storage batteries always
charged and ready to give a strong, steady
spark at all times. It is far ahead of any
European Dynamo. Besides this, the
Apple Automatic Sparker gives double
service by giving ample power for three
electric lights whether the engine is run-
ning or standing still.

We are Specialists in Ignition Apparatus.
If you have ignition troubles of any sort,
write us to-day.

The Dayton Electrical Mfg. Co.
75 Beaver Bldg. DAYTON, O.

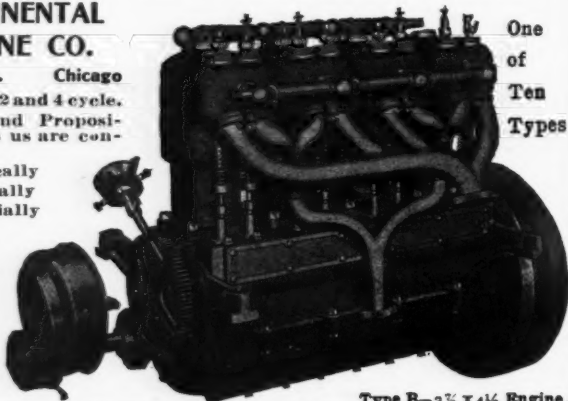
MOTORS—All Commercial Sizes

CONTINENTAL ENGINE CO.

Fisher Bldg. Chicago
1½-40 h.p. 2 and 4 cycle.
Designs and Proposi-
tions from us are con-
vincing.

Technically
Practically
Financially

Reverse
Gears and
Transmis-
sions,
Both Shaft
and Chain
Drive,
Launch Fit-
tings at cost
Write us.



Type B-3 1/2 x 4 1/2 Engine.

One
of
Ten
Types

The Automobile Supply Co.

1339 Michigan Boulevard Chicago, Ill.

Importers of

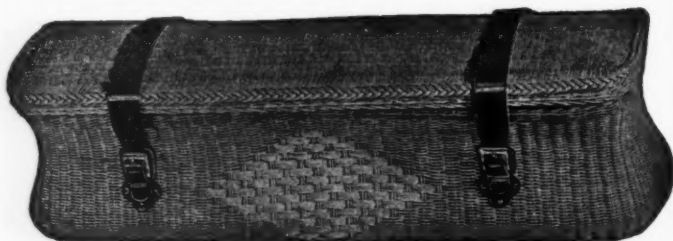
French Ammeters and Voltmeters

Ammeters, 0-15 Ampere - - \$4.50
Voltmeters, 0-6 Volts - - 4.00
Combination Volt and Ammeters
15 Ampere, 6 Volts - - 6.00

Send for our catalog.

POUNDED REED HAMPERS

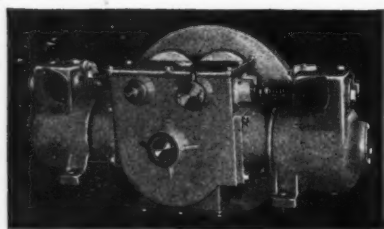
FOR 1905 SIDE ENTRANCE CARS



Largest and most complete line of Hampers and Golf Baskets for all cars.
1905 Catalogue ready.

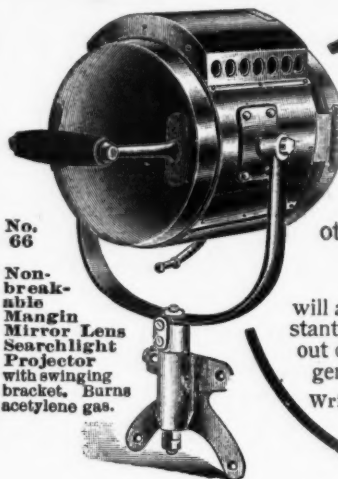
RATTAN NOVELTY CO. Springfield, Mass.

25 H. P. Vertical 16 H. P. Opposed



HIGH-CLASS
AUTOMOBILE
MOTORS

THE A. STREIT MACHINE CO. CINCINNATI, O.



No. 66
Non-break-
able
Mangin
Mirror Lens
Searchlight
Projector
with swinging
bracket. Burns
acetylene gas.

More light

The Neverout

Mirror Lens Searchlight

gives more light than by any
other searchlight you ever saw.

The new *Neverout*
patent safety gas producer

will also prove a revelation to you. In-
stantly lighted and extinguished with-
out danger or odor and without after-
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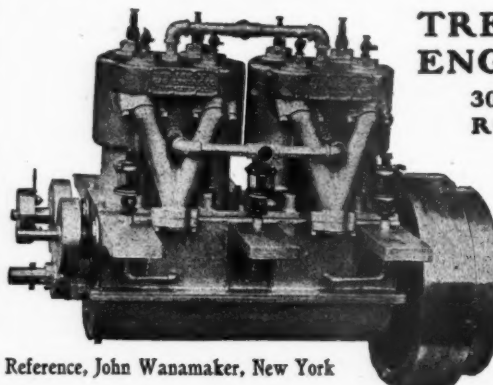
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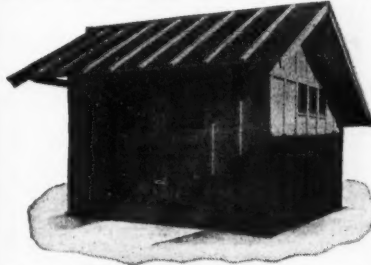
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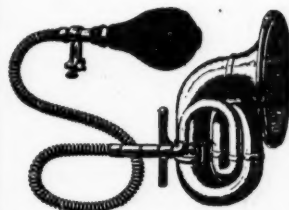
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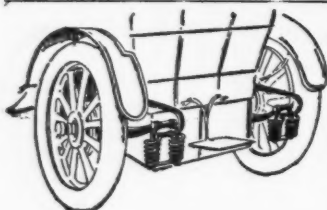
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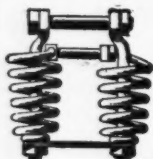
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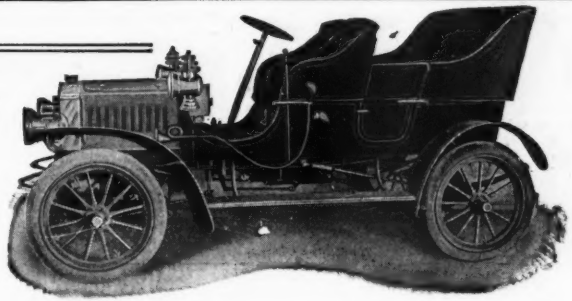
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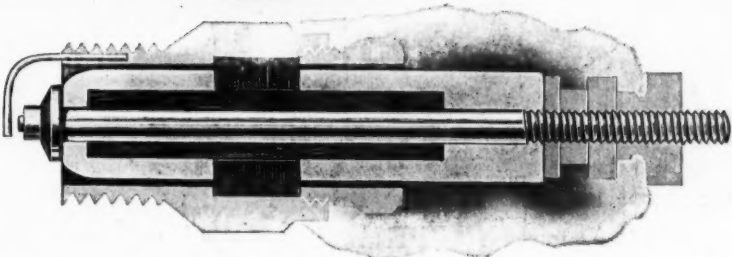
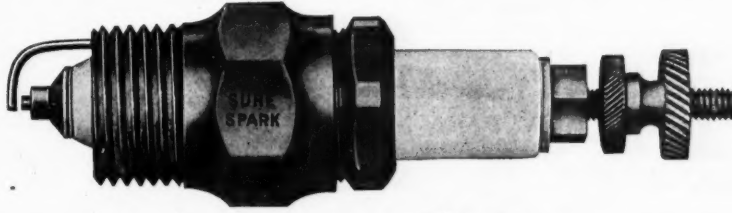


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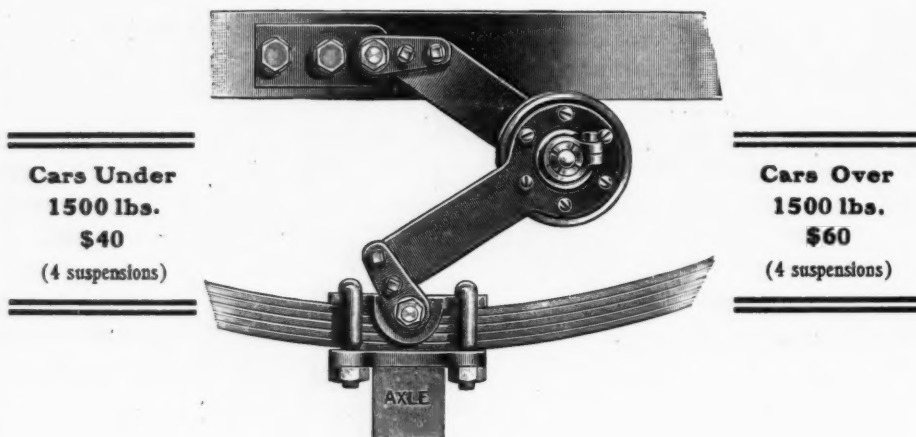
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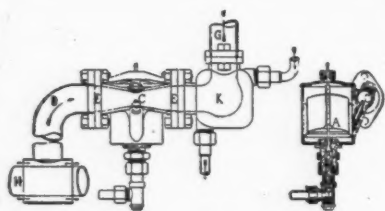
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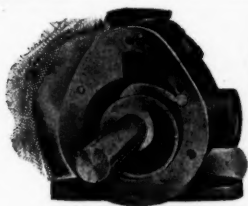
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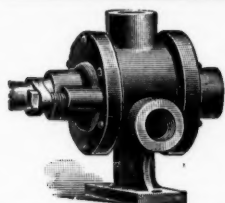
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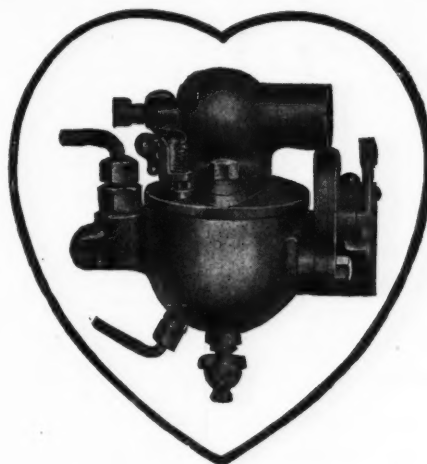
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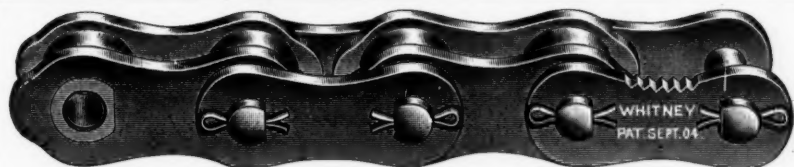
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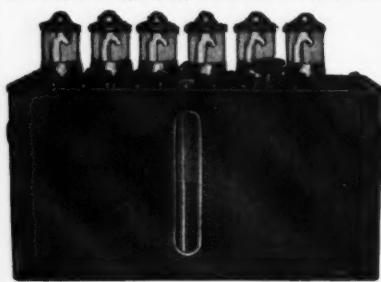
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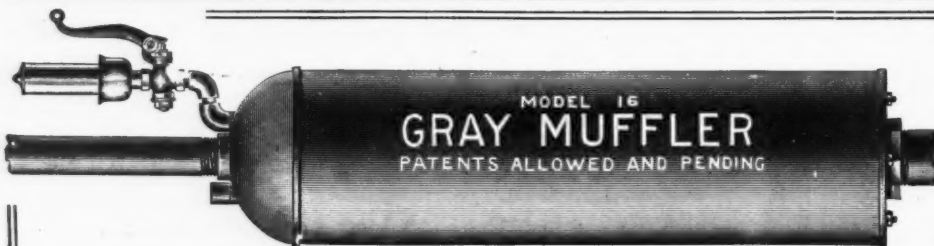
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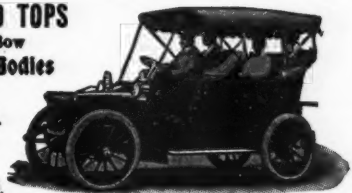
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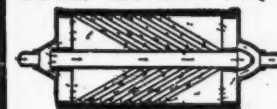


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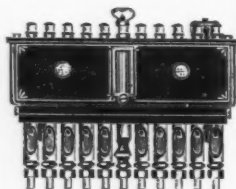
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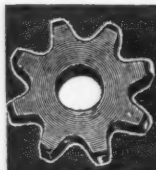
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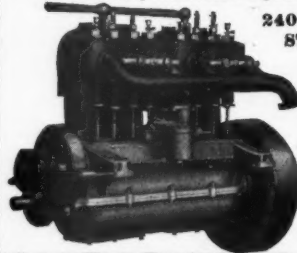
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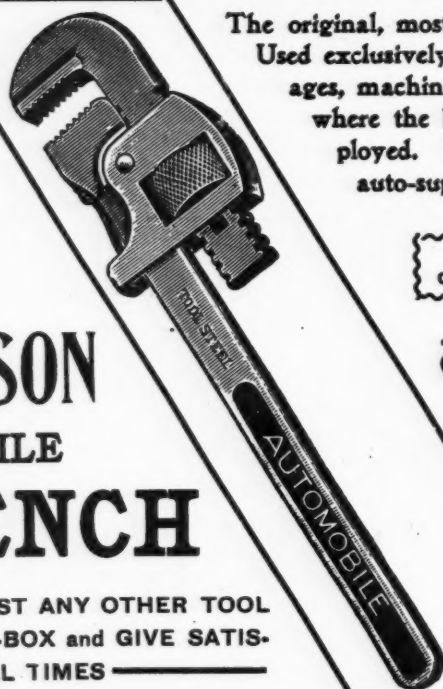
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¶ We welcome honest criticism but protest against FAKIR methods.

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Rambler

When one goes touring he wants to go and keep going; he wants to enjoy himself.

If he has a complicated piece of machinery in his automobile he will not have time to enjoy himself.

If he has a Rambler he has so simple a machine that any of the party can run it—and to be relieved of the wheel is desirable at times.

It doesn't require an expert to operate a Rambler—a novice can do it. That is the kind of a machine the tourist wants—one that anybody can run and one that will take him anywhere.

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